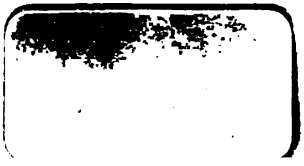

SECOND SESSION, FORTY-THIRD CONGRESS.

EXECUTIVE DOCUMENTS

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Volume 13....No. 79 to No. 99, inclusive.
Volume 14....No. 100, Coast Survey.
Volume 15....No. 101 to No. 170, except Nos. 150 and 157.
Volume 16....No. 157, Commercial Relations.
Volume 17....No. 171, Commerce and Navigation.
Volume 18....No. 172 to 180, inclusive.

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INDEX

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FOR THE

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43D CONGRESS, 2d Session. } HOUSE OF REPRESENTATIVES. { EX. DOC. 1, Part 3.

REPORT

OF THE

SECRETARY OF THE NAVY;

BEING PART OF

THE MESSAGE AND DOCUMENTS

COMMUNICATED TO THE

TWO HOUSES OF CONGRESS

AT THE

BEGINNING OF THE SECOND SESSION OF THE FORTY-THIRD CONGRESS.

WASHINGTON:
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1874.

CONTENTS

REPORT

OF

THE SECRETARY OF THE NAVY.

NAVY DEPARTMENT,
Washington, D. C., December 1, 1874.

SIR: The following report of the present condition of the Navy and its operations during the present year is respectfully submitted:

VESSELS OF THE NAVY.

One year ago the Navy consisted of 165 vessels of all classes, armed with 1,269 guns, exclusive of howitzers. Since that time there have been added to it 8 new steam-sloops, 2 torpedo-vessels, and 1 dispatch-boat, and it has been diminished by the sale of 2 wooden and 11 light-draught iron vessels, leaving as the present number 163 vessels with 1,254 guns, the armament having been slightly increased by the increase in the number of guns on the new ships. Of this whole number, 26 have sail-power only, and of these four are to be placed at the disposal of State and local authorities as school and training ships, under the direction of the act of Congress, providing for such disposition. Seven are in use only as receiving-ships; 2 are old line-of-battle ships, which have been on the stocks for many years, and 8 are of old type and in bad condition, and can be used only for barracks or stationary school-ships; leaving 5 which can be put to practical use at sea as store-ships transports, or surveying-vessels.

Our steam-navy consists of 137 vessels of all classes and in every condition. Of this number, 25 are tugs, used with one or two exceptions for yard purposes; 37 are armored vessels, and 2 are torpedo-boats, leaving 73 steam-vessels originally of a class adapted for cruising. These are classified at present as follows: First-rate, 5 vessels, 188 guns, 15, 163 tons; second-rate, 31 vessels, 510 guns, 57,528 tons; third-rate, 31 vessels, 183 guns, 18,956 tons; fourth-rate, 6 vessels, 21 guns, 3,183 tons; making a total of 73 vessels, 902 guns, including howitzers, and 94,830 tons.

Of the iron-clad or armored vessels, 16 are of a class and in condition for actual and efficient service; 4 others, of the class of powerful double-turreted monitors, are actually in hand undergoing repair, and the fifth is well worth the same attention; but the remainder may be counted as really useless for any active and efficient purpose. Four

of the largest of them, designed and commenced during the war, have never been launched, and consist, in fact, only of their wooden frames, still on the stocks, and their incomplete plating and machinery stored at the navy-yards, though their names and designed dimensions appear on the Navy list; and the remaining 12, of the class known as light-draught monitors, not able to carry their turrets, guns, and munitions of war, are valuable only as old material. Of the 73 steam-cruising-vessels, 5, of over 2,000 tons each, have remained on the stocks since the war, never having been launched, and are not estimated to be worth, for our purposes, the cost of completion; 7 are condemned and laid up in ordinary as unfit for further use; 3 others with condemned machinery; and 41 are in commission for various duty. Of the remaining 17, upon which we must rely to take the place of the cruising-vessels as they return home and are put out of commission, 2 are laid up ready for service, 7 are repairing at the various navy-yards, and 8 are building under special appropriations of Congress.

Thus it will be seen that one-half of the steam-navy adapted to cruising is in commission and in actual service. This number of vessels cannot be prudently diminished; but if it is to be maintained, there should be a gradual and constant addition to the Navy to supply the places of those which are each year found to be worn out and unfit for further service, and for this purpose a fixed amount of tonnage should be built every year. This amount may be small, but it should be constant and unfailing. To this end the Department has accumulated a large amount of live-oak timber in the various navy-yards, where it will yearly improve in condition and be available as the very best material for the frames of any ships it may at any time be necessary or desirable to build.

The rapid and almost complete disappearance of this most valuable ship-timber from our shores, (large quantities being sent abroad,) should arrest the attention of Congress, and measures should be taken to secure what remains. It is the growth of centuries, and once lost will never be regained.

CRUISING-STATIONS.

No change has been made during the year in the number or designation of the cruising-stations, which comprise six separate commands, although, in consequence of threatened disturbances of our friendly relations with Spain, the whole of the force was temporarily withdrawn from one, and the greater part from another, to strengthen the North Atlantic or home station. The European station and the South Atlantic station, which were thus temporarily deprived of their cruising force, have been again occupied, though not with precisely the same force. To the former, from which the Wabash, Congress, Alaska, Wachusett, and Shenandoah were withdrawn in December last, the Franklin, Congress, and Alaska have returned, with the addition of the Juniata; and to the South Atlantic station, from which the Lancaster and

Ticonderoga at the same time were transferred, the Lancaster has returned.

THE EUROPEAN STATION.—Rear-Admiral A. Ludlow Case, who left Ville Franche on the 31st of December for Key West, and was temporarily in command of the force on the North Atlantic station, comprising all the vessels concentrated at Key West from January 3 to April 10, returned to Gibraltar May 12, and re-organized the force on the European station, which he still commands. Early in February next, in consequence of his retirement from active service, he will be succeeded by Rear-Admiral John L. Worden, and will return home in the Powhatan, which has been detailed to take out the latter to Lisbon.

Since the re-establishment of the station the several vessels have been cruising in the Mediterranean, and have visited almost all the principal ports and islands frequented by commerce, and where our citizens have interests, from Gibraltar to the coast of Syria. The Congress, on the passage from Key West to the Mediterranean, touched at the Madeiras, Cape de Verd, and Canary Islands, Monrovia, Palmas, and Sierra Leone, some of which places were also visited by other vessels of this command on their way to the station.

SOUTH ATLANTIC STATION.—The force on the South Atlantic station is now under the command of Rear-Admiral William E. Le Roy, who succeeded Rear-Admiral James H. Strong at Rio de Janeiro, August 1. The vessels now there are the Lancaster, flag-ship, Monongahela, and Wasp. The Lancaster was attached to the North Atlantic station from January 25 to May 11, returned to Rio de Janeiro July 11, and on the following day the flag of Rear-Admiral Strong was hoisted on board. The Monongahela arrived out December 22, 1873. She sailed from Rio de Janeiro October 1 for the Kerguelan Land to take on board the observers of the transit of Venus, who were stationed at that point, and bring them back to Brazil. The Wasp has been employed in La Plata. The Brooklyn is preparing at Norfolk to proceed to this station as flag-ship, taking the place of the Lancaster, which is to be ordered home.

THE SOUTH PACIFIC STATION.—The force on this station, under the command of Rear-Admiral Napoleon Collins, who hoisted his flag on board the Richmond at Panama August 11, consists of that vessel, the Omaha, and the Onward. Rear-Admiral John J. Almy, who was in command at the date of the last annual report, has been assigned to the command of the North Pacific station in place of Rear-Admiral A. M. Pennock, transferred to the Asiatic station. On his departure from Panama, May 18, for San Francisco, in the Saranac, he left Capt. W. K. Mayo, senior officer present, in charge, who was succeeded by Rear-Admiral Collins August 11. Rear-Admiral Almy arrived at San Francisco June 21, and on the 17th of September shifted his flag to the Pensacola. One or another of the vessels of this station has been almost constantly at Panama, where we have the greatest interests at stake.

THE NORTH PACIFIC STATION.—Rear-Admiral A. M. Pennock com-

manded the force on this station until the 1st of May, at which time he was transferred to the Asiatic station, taking passage in the mail-steamer of that date from San Francisco. The vessels constituting the force on this station, under the command of Rear-Admiral Almy, as above stated, are the Pensacola, flag-ship, Saranac, Benicia, Portsmouth, Tuscarora, and Narragansett. The Tuscarora has been engaged in deep-sea soundings for a submarine cable between the coast of the United States and Japan and China. She sailed from San Francisco October 30, to run a line to Honolulu, after which she is to visit the Samoan group to inquire into matters affecting the interests of citizens of the United States. The Narragansett has been employed in examining the route of steamers along the Californian and Mexican coasts. The Saranac is now in the vicinity of La Paz, inquiring into alleged wrongs inflicted on American mining companies there.

In February last the Tuscarora, Commander Belknap, then at the port of Honolulu, in conjunction with the Portsmouth, Commander Skerrett, at the earnest solicitation of the government, was instrumental in aiding in the restoration of order in that city. On the 12th of that month, on the occasion of the election of a king, riotous proceedings occurred, and at the pressing request of the authorities, detachments were landed from those vessels the following day. Their commanding officers were prompt on the occasion to comply with the wishes of the government to aid in restoring order, and be in readiness to protect the interests of our own citizens should they be jeopardized. In scarcely more than fifteen minutes after signal on the 13th of February, companies comprising one hundred and fifty officers, blue-jackets, and marines, including a Gatling gun from the Portsmouth, were landed and marched to the scene of action. It was only necessary for the battalion to approach for the rioters to disperse. The court-house was occupied and sentries posted at other public buildings. No further disturbances followed, and the new king was inaugurated. On the 16th a part of the force was withdrawn, and on the 20th the remainder, the government signifying that their presence was no longer needed. The conduct of the officers and men of the battalion was highly commended, and resolutions of thanks to them were passed by the government, the legislative assembly, and the chamber of commerce.

The Benicia has been stationed at the Sandwich Islands since February last. The king availed himself of a passage in this vessel, which was put at his service for that purpose, to parts of his dominions, and afterward sailed in the same ship for San Francisco, where he arrived on the 29th of November.

THE ASIATIC STATION.—Rear-Admiral A. M. Pennock commands the force on this station, comprising the Hartford, flag-ship, Lackawanna, Monocacy, Ashuelot, Kearsarge, Yantic, Saco, and Palos. Rear-Admiral E. G. Parrott, who relieved Rear-Admiral T. A. Jenkins, December 12, 1873, having broken down in health, was condemned by med-

ical survey, and turned over the station to Capt. E. R. Colhoun, January 12, 1874, who continued in command until the arrival of Rear-Admiral A. M. Pennock, May 29. The Tennessee is preparing for service as flag-ship, to take the place of the Hartford, and will leave New York in the spring for the station, via the Suez Canal.

THE NORTH ATLANTIC STATION.—At the date of the last report the whole available force of the Navy which could be put afloat on the Atlantic Ocean was under orders to re-enforce this station. In addition to the regular force as stated in the last report, every available wooden and iron-clad ship in ordinary was dispatched as rapidly as it could be put in order and properly manned and organized. The Lancaster and the Ticonderoga were recalled from the South Atlantic, and the whole European fleet from the Mediterranean, and ordered to concentrate at Key West. The force thus concentrated on the station consisted of the Franklin, Minnesota, Wabash, Colorado, Lancaster, Brooklyn, Congress, Worcester, Alaska, Ticonderoga, Canandaigua, Shenandoah, Juniata, Ossipee, Wachusett, Powhatan, Wyoming, Kansas, Shawmut, Saugus, Mahopac, Manhattan, Ajax, Canonicus, Dictator, Despatch, Pinta, Fortune, and Mayflower, and Rear-Admiral Case, as senior officer present, assumed command, in pursuance of orders to that effect, January 3, 1874, the date of his arrival at Key West, Rear-Admiral Scott remained in command of a division.

The causes which led to this concentration of force were generally and briefly alluded to in my last report, and it may now be proper, in order to complete the record of the action of the Navy in connection with the Virginius affair, to recite the more prominent of the proceedings in relation thereto in which it took part.

Commander Cushing, of the Wyoming, upon receiving information, through dispatches from the consul-general of the United States at Havana, of the capture of the Virginius and the execution of a part of her crew, very properly sailed immediately from Aspinwall, where he was then stationed, to Santiago de Cuba, arriving there on the 16th of November. He put himself at once in communication with the authorities of the port, and protested against the further execution of prisoners of the Virginius. In the mean time the Kansas, Commander Reed, and the Juniata, Commander Braine, then at New York, had been instructed to proceed to Santiago de Cuba for the purpose of inquiring into all the circumstances connected with the capture of the Virginius and the execution of members of her crew. The former sailed from New York November 14, and the latter November 19. The Juniata reached Santiago de Cuba November 26, and the Kansas, meeting with severe weather, did not arrive until December 2. Commander Braine, the senior officer present, entered a protest against the further execution of prisoners of the Virginius, and took every means in his power to encourage them and conduce to their comfort. The Department's instructions were judiciously complied with. In carrying out the provisions of the protocol of

December 8, the Juniata was instructed to receive on board the survivors of the Virginius, provide them with comfortable accommodations, and convey them to the United States. These survivors, one hundred and two in number, were so received December 18, and safely landed at New York on the 28th of the same month. As another provision of the protocol contemplated the saluting of the American flag at Santiago de Cuba on the 25th day of December, 1873, and the Canandaigua, Captain Lowry, was dispatched to that port to be present when the salute should be given, and to return it. She left the capes of the Delaware December 12, and reached her destination December 19. This ceremony having by subsequent arrangement been waived, she remained at Santiago de Cuba until January.

In fulfillment of a third condition of the protocol, viz, the delivery of the Virginius at Bahia Honda to a war-vessel of the United States, on the 16th of December the Despatch was sent to that place for the purpose of receiving her. Captain Whiting, chief of staff of the North Atlantic fleet, was intrusted with this duty. The Virginius was received at the point and on the day mentioned, provided with a suitable crew and convoyed to the Tortugas. Here she was placed under convoy of the Ossipee, and dispatched to the north. Unfortunately, but unavoidably, in view of her condition and of the fact that she encountered heavy weather, the united efforts of her convoy and of the officers and crew which had been put on board of her were unavailing to save her from the dangers incident to a winter passage on our coast, and she foundered off Cape Hatteras, on her passage to New York. The several officers to whom were intrusted duties of this delicate nature, touching the settlement of an important international question, were instructed to clothe, in carrying out their orders, the firmness required with the utmost courtesy in their intercourse with the officers, both ashore and afloat, with whom they might be brought in contact, and these conditions were studiously observed in every particular.

On June 13, 1874, Rear-Admiral Scott, in consequence of his retirement and in pursuance of orders, hauled down his flag at Key West, leaving Capt. R. T. Renshaw temporarily in command until the arrival of Rear-Admiral J. R. M. Mullany, who had been appointed to succeed him. The latter hoisted his flag on the Worcester, at Key West, June 19, and is now in command of the station. The force at present consists of the Colorado, Worcester, Ossipee, Brooklyn, Kansas, Shawmut, Dictator, Canonicus, Wachusett, and Pinta, together with the monitors Ajax, Saugus, Manhattan, and Mahopac, which are at Pensacola, in readiness for immediate service. The Plymouth, now at New York, is under orders to this station, and the Brooklyn will be withdrawn and ordered to join the South Atlantic station.

There has always been more or less apprehension of the appearance of the yellow fever on board the vessels of this station during the summer and fall. A single case occurred on board the Ticonderoga, lying

at Key West, which proved fatal, and no other cases having developed, it was supposed all danger had passed, and the vessel was removed from quarantine. Nevertheless, instructions were given for the adoption of the strictest sanitary measures to prevent a recurrence of the disease, and such orders issued by the commanding officer as promised the desired result and a securement of health in the squadron. To these measures, it is believed, the good health of the officers and men of the station was greatly due. Only three other cases appeared on the Ticonderoga, which vessel was immediately sent to Portsmouth, agreeably to the Department's instructions, that on the appearance of yellow fever on any of the vessels they should be ordered north.

As a measure of economy and health, five of the monitors were removed from Key West to Pensacola, and all their officers and men taken out, except such as were actually required to keep them in good condition, so that, if necessary, they could be made ready for service without dalay or embarrassment.

THE YELLOW FEVER AT PENSACOLA

The navy-yard at this station had not been visited by yellow fever for a number of years, and was considered, in point of health, preferable to Key West. The season just past has not justified this assumption, although the monitors stationed there were comparatively free from the epidemic which carried off so many valuable officers and seamen. On its appearance on board the monitors, the senior officer of the station was authorized to remove them to any healthy locality, and to take any steps calculated to prevent a spread of the disease, and one of them, the Canonicus, received on board a number of officers and men, and proceeded with them to quarantine at New Orleans. It would, as a matter of course, be much healthier for the officers and crews of ships assigned to these tropical stations, could such ships be ordered north during the summer; but if we are to maintain fleets on the waters of the West Indies and the Spanish Main, they cannot, except in cases of imperative necessity, properly be scattered in search of health and comfort when pressing occasion for their presence may at any moment arise. Those to whom the exposure comes, in the regular course of public duty, must be retained (under stringent sanitary precautions, of course) in these waters, within easy communication with the Department, and prepared for any emergency which may arise.

THE NAVAL DRILL.

The affair of the Virginius having occasioned the concentration of a naval force of our armored and unarmored ships of war in the waters near the Cuban coast, much more considerable than had been assembled at any time since the civil war, and the disturbed relations that brought these ships together having been happily composed, the opportunity was seized to instruct the fleet in those naval maneuvers so assiduously

practiced every year by the great naval powers, and so highly valued by all naval men as a preparation for war. The officer in command, Rear-Admiral A. L. Case, was, therefore, instructed to take his unarmored ships to sea, and to perform, for a month, in the waters of Florida north of the Tortugas, the maneuvers of a fleet, following the tactical system of the new signal-book just then compiled under the direction of the Bureau of Navigation. In the whole world there can be found no better sea for such maneuvers than this Bay of Florida, with its sheltered waters, its easy anchorage, and its mild and agreeable winter climate.

The general instructions of the Department were elaborated and carried out in detail with much skill by Rear-Admiral Case and his officers, and maneuvers by a large force were executed during a full month, day after day, with great profit to the whole Navy, instructing a very large number of officers and men in the practice of duties hitherto known to most of them only in theory. The fleet returned to Key West early in March, and the monitors were then instructed in the same maneuvers as a separate force. Rear-Admiral Case and the commanding officers under him then devoted themselves for several weeks to the patient scientific instruction of the officers and men of the vessels in practical gunnery and in the use of torpedoes, that new and powerful element of naval war, still imperfectly known, and needing much careful experiment by the ships that are to use them in battle.

The instructions to Rear-Admiral Case also called for careful exercise in landing large bodies of men and guns from the fleet, to be maneuvered on shore. These were skillfully carried into effect; a brigade of 1,900 men was landed and maneuvered at Key West on the 30th of January, under the command of Commodore F. A. Parker, the chief of staff; and on the 23d day of March a still larger force, of 2,700 seamen and marines, with Gatling and field guns, was thrown on shore, under the command of Capt. E. Simpson, of the Franklin, in 84 boats, the landing being made under cover of the guns of four of the ships of the fleet, placed within easy range of the shore. The force was landed in excellent order, and, preceded by a battalion of skirmishers, the brigade advanced to the railway, where it took position.

After maneuvering for some hours, the brigade was re-embarked, having given signal proof of its efficient training, and that our seamen, under the skillful instruction of the graduates of the Naval Academy, themselves carefully trained during four years in the infantry battalion and field-batteries at Annapolis, may always be relied on as efficient troops, should it be necessary to disembark them for land-service.

At the beginning of April, the tactical exercises and practice with guns and torpedoes having been finished, the force was dispersed, the usual squadron remaining in the Gulf of Mexico, while the other ships returned to the North, or to their several stations in Europe or South

America, to resume their usual duties in supporting the interests of our country, and in protecting its commerce.

The important trust committed to Rear-Admiral Case was fulfilled with his accustomed zeal and ability, and in a manner highly satisfactory to the Navy Department.

The Department has also much reason to be satisfied with the proofs given of the success of our Naval Academy and torpedo-school, in imparting to our officers the varied training now become essential to accomplished seamen.

PUBLIC MARINE SCHOOLS.

An act of June 20, 1874, to encourage the establishment of public marine-schools, authorized and directed the Secretary of the Navy to furnish, on certain conditions, upon the application of the governor of the State, a suitable vessel, with all her apparel, charts, books, and instruments of navigation, provided the same could be spared without detriment to the naval service, to be used for the benefit of any nautical school, or college having a nautical branch, established at each or any of the ports of New York, Boston, Philadelphia, Baltimore, Norfolk, and San Francisco; and further authorized the detail of proper officers of the Navy as superintendents of or instructors in such schools.

Application having been made by the governor of the State of New York and by the governor of the State of California to have furnished for those States respectively a vessel for the purposes indicated in the act of Congress referred to, the sailing sloop-of-war St. Mary's has been designated for the State of New York and the sloop-of-war Jamestown for the State of California. These vessels are the best of their class in the Navy, and well adapted for training-ships. They will be turned over to the State authorities, with all their spars, sails, boats, rigging, chains, anchors, battery, and articles of general equipment, with the exception of sea-stores and ammunition. A commanding officer or superintendent has been detailed for each; also an executive officer, as an assistant, for the St. Mary's. The naval service will be subjected to a considerable expense in preparing these vessels for this service, for which provision should be made by Congress.

VIENNA EXPOSITION.

The store-ship Guard returned to New York from the Vienna Exposition April 14 last. She brought home a large collection of articles which had been on exhibition and were not disposed of, belonging to American exhibitors.

In accordance with the expressed desire of the President to do all in his power to relieve the wants and aid in the return to the United States of indigent mechanics employed in the American department in the Vienna Exhibition, instructions were issued to the Guard to afford a passage to such of that class as she could accommodate, and who were

willing to mess with the crew. The Guard was also instructed, if she had room, to bring over any articles which might be intended for our Centennial Exhibition in 1876.

ICELANDERS, ALASKA.

For the last half year a desire to explore our extreme northwestern coast, with a view to settling, has been expressed by certain Icelanders who have begun an emigration to this continent, and who wish to establish themselves in some region where the climate shall, in summer at least, approximate that of their native island. With the aim of assisting a movement of which the possible effect might be to secure for the coast of the Northern Pacific so excellent a population, which at the same time would furnish hardy fishermen and superior seamen, and in compliance with a suggestion of the State Department, I dispatched the Portsmouth, carrying a committee selected by these Icelanders from their own number, to make a short reconnaissance of several points on the Alaskan coast. She sailed from San Francisco in the middle of September, and has just returned with some of the committee to that port. The latter expect to report immediately and at length to their countrymen, both in Iceland and in Canada, as well as in this country. From all the accounts which have been received I am of opinion that the report will be favorable, and that they will recommend an immediate emigration of some of their countrymen to our western coast, with a view to an extensive settlement in the near future. It may easily be that Alaska, however damp and cold, as compared with the greater portion of the United States, will gain by a comparison with the bleak *jökuls* and barren lava-beds of Iceland, and that the dryness of air and height of temperature, which to the American appear necessary, may, to a native of that island, seem almost noxious. In case, however, the Icelandic committee should find Alaska not well adapted for colonization by their countrymen, they cannot fail to find a suitable region upon the coast of Washington or of Oregon, or even of Northern California, where the climate is most favorable to agriculture, and affords as cool a summer and a winter by many degrees not so cold as those of Iceland. In either event, in the interest of our Navy and of commerce, I earnestly recommend, if the Icelandic committee shall find at any point on our Pacific coast a satisfactory location, that whatever assistance the Government is competent to extend toward establishing an Icelandic colony there, be promply afforded.

I learn that efforts are making to attract this incipient emigration elsewhere, and it is understood that the clannishness of these hardy people will direct future emigration almost exclusively to the first well-established colony. It is not proper for me, in a report of this character, to urge the many material and political advantages which must follow from the settlement of this part of our public domain by a people of this character, but such a result could not but be of value both to our

national and commercial marine. The large choice of occupation offered within our territory, and the comparative hardships of a sea-faring life, combine to prevent our naval and merchant marine from obtaining a fair and desirable share of the most energetic and well educated elements of our population. As the Pacific coast shall become more thickly settled the valuable fishing-grounds which skirt portions of it will make extensive fisheries there; and from this quarter may in time be expected a replenishment of the stock of native sailors. Out of the various racial components of our population, those in which either inherited proclivities or the force of circumstances have developed a taste for sea-life, will, naturally, more than others, be attracted thither, and as the first great impetus which American commerce will receive is probably to take effect on the Pacific, and in the direction of the vast and newly awakened empires of the East, a large demand for American sailors will be created upon that coast.

I shall not discuss here the broader questions connected with this subject, but at least the existence on our western coast of a settlement more or less extensive of these hardy, industrious, and orderly Icelanders, devoted to the sea and its various pursuits, trained to its dangers, and experienced in its trials, would be a valuable and fruitful source of supply to the naval service of trained American seamen in time of need.

INTEROCEANIC SHIP-CANAL.

In my last report I referred to the completion of the work intrusted to the expeditions organized under the authority of Congress for the survey of the several routes for an interoceanic ship-canal, thus ending the labors of my Department in this field, which had been strictly of examination and survey.

The distinguished commission which you appointed for the examination and consideration of this subject, however, expressed to me, early in the present year, their wish that an opportunity be afforded for an examination, by competent engineering officers, of the particular lines of survey at Nicaragua and Napipi, in order that their principal engineering difficulties might be considered, the feasibility of the work reported upon, and a general comparison of the two surveys made by officers passing over and considering both lines together.

The Department entered heartily into the ideas of the commission. A vessel of war was detailed to convey the engineer officers selected to and from the location of the surveys to be examined, and to afford to them the necessary facilities for their work.

The officers of the Navy, lately in charge of these surveys, were directed to accompany the representatives of the commission over their respective routes, and to render to them every aid in an inspection of the difficulties for the execution of the work proposed. Invitations were tendered six prominent American civil engineers, of established reputation in this class of work, to accompany the parties of observation,

and two gentlemen accepted, and were afforded every opportunity for examining these lines of survey. The steamer detailed for the convenience of this party returned to the United States after an absence of three months, and it is believed every facility was afforded to a thorough examination of the canal-routes known as Nicaragua and Napipi, as had been requested by the commission. Their report is being prepared, and will, it is hoped, be ready to be printed in the appendix.

THE TRANSIT OF VENUS.

It has been a part of the duty of this Department, under provisions of laws passed by Congress at its last three sessions, to organize expeditions for observing the transit of Venus, which occurs on December 8 of the present year. A plan of observation was very carefully matured by the commission created by Congress for that purpose in 1871, and the organization and arrangement of the parties were made to accord with that plan. The entire scientific corps of the expeditions, numbering forty-two persons in all, spent several weeks at the Naval Observatory last spring in preliminary practice with the same instruments they were to use at the stations, thus becoming familiar with the difficult and delicate operations involved in the final observations. The five parties designed for the southern stations were embarked on the ship Swatara, Capt. Ralph Chandler, and sailed from New York June 8. So far as yet known the parties were all successfully landed at the selected stations, with the single exception of that on the Crozet Islands. Here there is no anchorage, and the constant stormy weather which prevailed during the period which it was prudent for the ship to delay, prevented a landing. The possibility of this failure had been anticipated by the commission, and the Swatara had been directed to land the party at or near Melbourne, in the event of failure to land at the station first selected.

The three northern parties were sent by the regular course of commercial conveyance to Nagasaki, which had been selected as one of the stations. The parties designed for Wladiwostok and Peking were taken thither from Nagasaki by naval ships.

It not being prudent to attempt the return of all the southern parties by the Swatara, the Monongahela was sent out from the Brazilian station to convey the party from Kerguelen Island to Rio de Janeiro, whence they can return by regular lines of travel.

HYDROGRAPHIC OFFICE.

Permit me again to bring to your notice, and most earnestly recommend, that the Hydrographic Office, which is so important to the maritime interests of the country, should receive from Congress such support as may place it on a footing with the most important of such institutions abroad, and enable it to furnish to our naval and commercial marine the charts, books, and information required in the navigation of

the waters of the globe. Before the establishment of the United States Hydrographic Office, the navigators of our own marine were almost entirely supplied from the hydrographic labors of England; their charts, books, and nautical information were all imported, and this great commercial nation was dependent on a foreign country for the means of navigating its vessels and tracing their paths on the great deep. It is true that a few enterprising individuals had constructed and issued the most necessary charts, but these were insufficient, and soon proved that no private enterprise could be remunerated for the expense of such issues.

Since the establishment of the United States Hydrographic Office, in 1866, the commerce of this country, so far as our own resources are concerned, has been wholly dependent upon it for its hydrographic information, for which there is a constant demand. It gratifies me to be able to state that the office has been equal to the emergency, that its progress has been rapid and most satisfactory, and that it has merited the confidence of our boards of trade, and of our commercial and naval marine. Much has been done, but much more is necessary to be done. In its educated and accomplished officers the Navy of the United States possesses the *personnel* for the performance of this and all other duties which can be required of the profession, but to carry the work to a successful termination the means must be supplied. It is evident that hydrographic work on shore and afloat is practically as useful and important as any upon which the Navy can be employed in time of peace, but there is great need that the importance of this work should be more fully appreciated.

At the date of my last annual report two vessels of the Navy, the Portsmouth and the Narragansett, were engaged on surveys in the Pacific Ocean. The work performed by them has been most satisfactory. The latter was engaged in the survey of the coasts and Gulf of Lower California, the charts of which are now in course of publication. The Narragansett is now on her return to that coast to make a few important additions to the survey. Owing to the want of a sufficient appropriation, it was found necessary to withdraw the Portsmouth from the survey.

In the surveys of the great channels of commerce, this country, with the exception of a few isolated expeditions, has done but little, and we have been indebted for our hydrographic information almost entirely to the labors of England and France. The North Pacific Ocean is in a measure considered an American ocean, and the accurate establishment of the innumerable and comparatively unknown dangers becomes a pressing duty of the nation claiming the preponderance in these waters. The annual list of vessels lost (by statistics, numbering 1,465 in 1872) always contains a large number whose fate is unknown, and there is great probability that many have been wrecked on dangers not at all shown or imperfectly located on charts. This applies especially to the

Pacific. Serious errors are also known to exist in all charts of the coasts of the republics bordering the Gulf of Mexico and the Caribbean Sea.

A running survey of the gulf coast of Mexico has been made by the United States steamer Fortune, Lieutenant-Commander Green, under the supervision of the Bureau of Navigation, which has very materially changed the delineation of the coast as heretofore laid down, and has disclosed new and important shoals. This work should be extended at least to the boundary of Brazil. At the present day our knowledge of the hydrography of many of the islands of the West Indies is very imperfect, and the correct positions of many of them by no means established with accuracy. An expedition for the determination of longitudes in the West Indies, by means of the electric cable, as stated in my report of the last year, was organized by the Hydrographic Office under the Bureau of Navigation. Owing to adverse occurrences, this expedition was necessarily detained, but has recently left the United States under the command of Lieutenant-Commander Green, for the prosecution of this work.

During the present year the United States steamer Tuscarora, Commander George E. Belknap, has been employed in taking deep-sea soundings in the North Pacific Ocean, for the purpose of ascertaining a practicable route for a submarine cable between the United States and Japan. The northern and southern routes between these countries have been examined by running lines of soundings. The line on the former route commenced at Cape Flattery, touched the Aleutian Islands, skirted the coasts of the Kurile Islands, and terminated at Yokohama, Japan. On the latter route the line commenced at San Diego, California, touched the Hawaiian and the Bonin Islands, and terminated also at Yokohama. Besides these lines of soundings others were run on and off shore between Cape Flattery and San Diego, for the purpose of determining the continental outline or the commencement of the ocean-bed proper. The reports of Commander Belknap have been received by the Bureau of Navigation, and collated at the Hydrographic Office, and are now in course of publication.

For the prosecution of the survey in the Pacific Ocean I recommend that the appropriation be allowed in accordance with the estimates submitted by the Bureau of Navigation, and also that an appropiation be made for the construction or purchase of two three-masted schooners of 300 tons burden, with their equipment, including two steam-cutters, for the more economical and expeditious advancement of the survey.

I must again ask your consideration of the necessity of a suitable building, which should be the property of the Government, for an Hydrographic Office; and, referring to my former reports, repeat that I do not consider the rented building at present occupied by this Office either suitable or safe without a considerable fire-proof addition. I, therefore, recommend that an appropriation be made for the purchase and fitting, or for the construction, of a safe and secure building for this purpose.

For the various hydrographic work accomplished by this Office during the last fiscal year, I refer you to the report of the hydrographer to the chief of the Bureau of Navigation.

NAVY-YARDS.

The subject of the condition and necessity of our navy-yards and naval hospitals was carefully investigated during the last summer, by the Senate Naval Committee, under a special resolution for that purpose, and their report, to be made to the Senate, will, without doubt, contain much information and many valuable and authoritative suggestions. In the mean time I beg to renew the recommendations made in my previous annual reports in reference to the navy-yards, and, through you, to press upon Congress the propriety of increasing and developing their practical resources.

In view of the great strides made by other naval powers, I am impelled thus to urge the imperative need of bringing our naval workshops up to the highest state of efficiency.

Mare Island.—At this navy-yard, whose site, for all the requirements of a great naval station, is unsurpassed, the work of building a dry-dock capable of taking in the largest vessel in our Navy is progressing satisfactorily. The iron-working shop for construction is nearly completed. Our great naval interests in the Pacific are growing year by year, and I strongly urge the necessity of liberal appropriations for the purpose of developing this important naval arsenal.

Pensacola.—In consequence of the unusually fatal epidemic which prevailed at this navy-yard during the past summer, the rebuilding of the workshops has been somewhat retarded. The plans for commencing the construction of a dry-dock are in a state of forwardness. An additional appropriation will be required to complete this important object. There is an absolute necessity that a wooden hospital should be built outside the navy-yard, and the site of the old hospital destroyed during the war is recommended. The present hospital is situated within the navy-yard, and in the immediate vicinity of the quarters and the workshops; and occupied as it was, during the epidemic, with yellow-fever patients, it assisted in scattering the seeds of disease throughout the yard. It should be torn down and a new hospital erected as suggested.

An appropriation is also needed for the erection of suitable barracks for the marines of the station. It would be difficult to overstate the importance of this navy-yard as a rendezvous and repairing-yard for our vessels of war in the event of complications in or near the Gulf of Mexico, the West Indies, or the Spanish main.

League Island.—At League Island the special appropriation voted by Congress for the purpose has been judiciously expended in removing to it material from the Philadelphia navy-yard. The machine-shop and store-house for yards and docks is completed, and a part of the machinery is in operation. The great iron-working establishment is roofed, and

can be finished in a short time, and the massive building for steam-engineering is well under way. The successful erection of these great buildings has conclusively established the fact that there is no difficulty in finding a secure foundation at moderate cost.

I beg again to suggest that Congress cause the Philadelphia navy yard to be valued, and that the ascertained value in money be advanced to the Navy Department, with instructions to expend the amount thus appropriated within four years upon such improvements at League Island as shall warrant the abandonment of the old yard. The Treasury may then, by its sale, be re-imbursed for the sum advanced.

New London.—At New London a building for equipment purposes, erected under the appropriation made at the last session, is nearly finished, and the main wharf at the station is being extended.

Little has been accomplished at any other of the navy-yards on the Atlantic seaboard beyond the necessary repairs to yard-buildings, wharves, and dry-docks.

At *Kittery* nothing has been done further than was absolutely necessary to maintain the yard in its present admirable condition.

At *Boston* the dry dock has been thoroughly repaired, the wet basin cleaned out, and proper cribs built for retaining the timber. Various repairs have been made to the rope-walk and the other wharves, and the yard-buildings placed in as good condition as the appropriation would permit.

At *Norfolk*, a station most favorably situated and most valuable in its adaptation for naval work at all seasons of the year, we have not been able to enter upon any large new work, but are progressing slowly with the gradual improvement of its large advantages, and its restoration to something like the condition it had before the late war.

New York.—Past experience has demonstrated that the value of this navy-yard in time of emergency cannot be overestimated. From its proximity to the great maritime city of the nation, skilled labor and all the vast resources of the country are brought to its gates, and the accumulation of naval stores, wharves, docks, and workshops of the cities of Brooklyn and New York are its immediate adjuncts. I trust that no legislation may ever interpose to change its unrivaled site or to diminish its present area. Partial repairs have been made to the cob-dock, but for want of funds much has been left undone, to the great detriment of this important work.

ORDNANCE.

This Bureau has continued its experiments in the manufacture of gunpowder, and has sufficiently settled the points of detail to make it desirable to increase our stock of this prime necessity of war, which had been allowed to fall quite low pending this investigation. An appropriation is recommended.

The question of the substitution of rifled for smooth-bore cannon as

the entire armament of our ships has also become of paramount importance since their universal adoption by other maritime powers.

While the whole subject was still immature, undergoing investigation by other nations more vitally interested in the speedy solution of the problems of breech or muzzle-loading, relations of caliber of gun to form and weight of projectiles and their charges, and methods of rifling, we wisely held aloof. But it has now passed the experimental stage, and all artillerists are convinced that the time to discard the smooth-bore has come, reserving the details of the gun for further discussion.

Although this Department does not propose entering into the construction of monster cannon, yet the manufacture of the heavy ordnance required in the present day is an art requiring an extensive plant and trained skilled workmen.

The Bureau of Ordnance is prepared with a system of armaments for our ships not inferior to that of any other power, whenever Congress shall authorize the necessary expenditure.

TORPEDOES.

Our circumstances do not require that we should take part in the rivalry between monster cannon and impenetrable armor, since few of our ports are accessible to ships carrying either; and these may be better defended by attacking the vessel below her armor by subaqueous cannon, movable and stationary torpedoes.

The latter, which more peculiarly appertains to the land-service, being necessarily under cover of the guns of fortifications, recent experiments show cannot be relied upon to close the entrance of any of our important harbors. They must be supplemented by torpedo-boats operating by actual contact and by movable torpedoes, which can be directed from the shelter of the monitor turrets.

Two torpedo-boats, the Intrepid and Alarm, have been completed, but not in season for the extended trials necessary fully to develop all their capabilities.

The general professional opinion of the Navy is that the offensive torpedo can also be most effectually operated from swift, inexpensive, unarmored vessels, some of which will escape the hostile guns, owing their safety to small size and rapid maneuvering.

The consideration of Congress is earnestly directed to this most important and economical means of naval warfare, which is at this time occupying the attention and commanding the interest of the scientific and civilized world.

THE MARINE CORPS.

The Commandant of the Marine Corps reports the discipline of that service as creditable alike to officers and men. During the year, in conformity with legislation, the strength of the Corps has been reduced five hundred men, but the Commandant is of the opinion that, in view of the number of ships, navy-yards, and magazines requiring guards, the

present limited number is not sufficient for all the duties required of the corps. In regard to this gallant Corps, I am glad to say that its usefulness as a part of the naval service has been well established by the active and honorable part it has always borne in the achievements of our Navy, and by the concurrent testimony of our most experienced and distinguished commanders.

NAVAL-PENSION FUND.

Statement of the number and yearly amount of pensions of the Navy on the rolls November 1, 1874, *and the amount which was paid during the last fiscal year.*

Class.	On the rolls November 1, 1874.	Yearly amount of pensions on the rolls November 1, 1874.	Amount paid for pensions during the fiscal year ending June 30, 1874.
Navy invalids	1,601	$171,350	$174,185 00
Navy widows and others	1,814	290,558	367,511 04
Total	3,415	461,908	541,696 04

ESTIMATES AND EXPENDITURES.

The appropriations applicable to the fiscal year ending June 30, 1874 including the unexpended balance of the appropriations for the building of new sloops, and the special appropriations to re-imburse the Bureaus for their extraordinary expenditures during the threatened complications with Spain, amounted in the aggregate to $27,147,857.68, and the actual expenditures for the same period, to wit, from July 1, 1873, to June 30, 1874, from these appropriations, amounted to $26,254,155.82, or about $900,000 less than the whole amount. The appropriations made available for the current year, commencing July 1, 1874, amount in the aggregate to $19,273,731.27. The amount of these appropriations for the current year, drawn for the five months since July 1, and up to the 1st of December, 1874, is $11,854,446.87, which, reduced by the amount refunded during the period, and that remaining in the hands of the paymasters and agents of the Government, will leave a little less than $9,000,000 as the sum actually expended from the current appropriations during the five working summer months of this year. A detailed account of the monthly expenditure of the Navy appropriations for the fiscal year 1873–'74, and for the present year to December 1, will be found in the appendix.

ESTIMATES.

Pay of officers and seamen of the Navy	$6,600,000 00
Pay of civil establishment in navy-yards	215,000 00
Ordnance and torpedo corps	624,431 00

Coal, hemp, and equipments	$1,500,000 00
Navigation, navigation supplies	117,500 00
Hydrographic work	111,300 00
Naval observatory, nautical almanac, &c	52,000 00
Repairs and preservation of vessels, &c	3,505,000 00
Steam-machinery, tools, &c	2,000,000 00
Provisions	1,500,000 00
Clothing	200,000 00
Repairs of hospitals and laboratories	25,000 00
Surgeons' necessaries	40,000 00
Contingent expenses of various departments and bureaus	451,600 00
Naval Academy	142,817 40
Support of Marine Corps	1,098,196 25
Naval Asylum, Philadelphia, &c	53,723 00
Maintenance of yards and docks	860,000 00
	19,096,567 65

These are a little more than $150,000 less than the estimates for the same objects last year, while the current repairs of the buildings, docks, and public works of various kinds at the several naval stations are estimated to require $1,791,500 in addition, making the whole amount of all the estimates aggregate somewhat larger than those of last year.

In conclusion, I am glad to be able to report the fighting-force of our Navy in good and effective condition. During the last two years the whole fleet of our single-turreted monitors has been thoroughly overhauled and repaired, their sides raised up, their rotten wooden beams and decks replaced by iron, and their turrets and machinery put in complete order, so that they are now efficient to their utmost capacity, and ready to go to sea at any time as soon as crews can be put on board and organized. These, with the Dictator and Roanoke, also in good order, make a fleet of sixteen iron-clads, powerful for any naval purpose which does not require long voyages, or great speed. Two powerful iron torpedo-vessels have also been completed, and are ready for service, fully equipped with this most powerful weapon of modern warfare. Four of our powerful double-turreted monitors, viz, the Terror, the Miantonomah, the Monadnock, and the Amphitrite, (by far the most formidable vessels ever in our Navy,) are also now in hand undergoing repairs, and the plans are also being matured for the repair of the Puritan, the only one of our efficient iron-clads which remains untouched. The eight new sloops specially authorized, and built entirely of live-oak or iron, are about ready to be added to our cruising-navy, and seven other of our vessels have been, or are being, thoroughly repaired with like durable material, and supplied with new and improved machinery, so as to be in all respects equal to new ships of their class. We shall thus have added, by the end of the year, fifteen new and active ships to our cruising-navy, to take the places of those vessels which are worn out and must be relieved. Most of our powerful wooden ships of the first class were also put in condition at the time of our threatened difficulties of

last year, and are now in commission or in ordinary, ready for immediate service when needed. Thus all that there is of our Navy either is or will shortly be in the best state possible for vessels of their respective classes, and all will be, and will continue to be effective for service, except those of our cruisers which, built hastily of green white-oak, are now rapidly reaching the limits of their sea-life, and are one by one falling out of the line of active duty, to be laid up or sold as unfit for further service.

Warned by the rapid decay of our white-oak ships, the Department has required that all new wooden ships should be built, and all our extensive repairs made, of live-oak, and has, for this purpose, and for the future necessities of the service, secured and accumulated a large quantity of this almost invaluable but rapidly-disappearing material in the various navy-yards, where it will be properly cared for and seasoned, for use as occasion may require.

This statement certainly shows our Navy to-day in a better condition of effective and permanent strength than it has been for years; and when we understand that three years ago none of our now efficient iron-clads, except the Dictator and the Terror, were fit for any service whatever, and that during that time we have, in addition to putting them in repair, practically built fifteen live-oak cruising-ships, and carried on also the necessary repairs to maintain the Navy afloat; and that at that time there was scarcely a stick of live-oak timber in the Government yards, where now is gathered an adequate supply of this most valuable and improving material; and when we remember that it has been possible, under the direction of our skilled and practical officers, so to utilize the liberality of Congress, that this has been accomplished out of the comparatively small portion of the naval appropriations which it is possible to devote to the actual building and equipment of ships, we are justified in feeling some pride in the prospect, that the American Navy will be able in the future, as in the past, to contribute its fair proportion to the strength, resources, and dignity of a powerful though peaceful nation.

GEO. M. ROBESON,
Secretary of the Navy.

The PRESIDENT.

SUPPLEMENT.

Exhibit of expenditure chargeable to Navy appropriations.

	Drawn.	Refunded.	Expended.
Appropriations for 1873–'74.			
1873.			
July	$2,926,025 36		$2,926,025 36
August	1,609,104 00	$6 37	1,609,097 63
September	4,519,844 54	2,000 00	4,517,844 54
October	2,901,158 03	1,845,912 93	1,055,245 10
November	2,865,395 75	71,046 23	2,794,349 52
December	3,562,866 69	3,760 14	3,559,106 55
1874.			
January	3,015,468 79	470,236 66	2,545,232 13
February	2,344,337 97	445,121 04	1,899,216 93
March	1,932,637 38	280,853 47	1,651,783 91
April	2,179,261 59	488,736 02	1,690,525 57
May	1,293,867 02	270,569 52	1,023,297 50
June	1,062,425 64	79,994 56	982,431 08
Total	30,212,392 76	3,958,236 94	26,254,155 82
Appropriations for 1874–'75.			
1874.			
July	2,636,583 00		2,636,583 00
August	2,376,229 03		2,376,229 03
September	2,705,056 29	140 00	2,704,916 29
October	2,258,742 67	100,796 88	2,157,945 79
November	1,877,841 88	154,140 44	1,723,701 44
Total	11,854,452 87	255,077 32	11,599,375 55

MOVEMENTS OF THE VESSELS ON THE STATIONS.

EUROPEAN STATION.

On the 30th of November, 1873, the European command comprised the following vessels, viz: Wabash, (flag-ship,) 45 guns; Congress, 16 guns; Alaska, 12 guns; Shenandoah, 11 guns; and Wachusett, 6 guns. All of these at that time were under orders to proceed to Key West, Fla., and on that day the Wabash, Congress, Alaska, and Wachusett left Gibraltar, and the Shenandoah Ville Franche on the 5th of December, stopping at the following places *en route*, viz: Wabash, at St. Thomas, W. I.; Congress, at Funchal, Madeira, and St. Thomas; Alaska, at Funchal and St. Thomas; Wachusett, at Funchal and St. Thomas; and Shenandoah at Tangiers, Morocco, Funchal, and St. Thomas.

On their arrival at Key West they became part of the combined fleet of the European, South and North Atlantic stations, under command of Rear-Admiral A. Ludlow Case, and took part in all the exercises and evolutions in the Bay of Florida, Tortugas, Key West, &c., until the fleet was broken up.

The force for the European station was reorganized under the command of Rear Admiral A. Ludlow Case, and consists at present of the

following vessels: Franklin, (flag-ship,) 39 guns; Congress, 16 guns; Alaska, 12 guns; and Juniata, 8 guns.

The movements of the vessels have been as follows:

FRANKLIN.—The Franklin sailed from Key West April 11, and has since visited the ports of Funchal, Gibraltar, Cartagena, Spain; Ville Franche, France; Spezzia, Italy; Ville Franche and Marseilles, France; Port Mahon, island of Minorca; Messina, Sicily, Zante, Ionian Islands; the Piærus, Smyrna, Turkey in Asia, Syra and Milo, Grecian Archipelago, Suda Bay, in the island of Candia, Turkish Dominions, Messina, and Naples. Will leave Naples November 20 for Spezzia, and thence to Ville Franche, into winter quarters.

CONGRESS.—The Congress left Key West April 10, and has since visited the ports of Funchal, Teneriffe, Canary Islands, St. Vincent, Cape de Verde Islands, Monrovia, Palmas, and Sierra Leone, West coast of Africa, St. Vincent, Funchal, Gibraltar, Ville Franche, Marseilles, Barcelona, Spain; Port Mahon, Messina, Zante, the Piræus, Smyrna, Syra, Milo, Suda Bay, Messina, Palermo, and Naples. Will sail thence on the 18th of November for repairs to her engines and boilers.

ALASKA.—The Alaska left Key West April 9, and has since visited Horta, island of Fayal, Bordeaux, France; Corunna, Spain; Lisbon, Portugal; Gibraltar, Tangiers, Algiers, Algeria, Tunis, Messina, Palermo, Spezzia, Ville Franche, Naples, Messina, Cephalonia and Cerigo, Ionian Islands; the Piræus, Syra, Smyrna, Rhodes and Cyprus, Turkish Archipelago; Beirut and Jaffa, Syria; Port Oaid and Alexandria, Egypt; Malta, and Civita Vecchia. Will sail thence for Spezzia to undergo repairs.

JUNIATA.—The Juniata left Key West April 9, and has since visited the following ports, viz: Fayal and St. Miguel, Western Islands; Cadiz, Spain; Gibraltar, Malaga, Almeria, Cartagena, Denia, Alicante, Tarragona and Barcelona, Spain; Ville Franche, Spezzia, Messina, Tarranto, Brindisi, Marfredonia, Ancona and Venice, Polo and Fuime, in Austria; Sipalatro, Ragusa and Durazzo, in Dalmatia, Austrian Dominions; Arlona, in Albanian Turkey in Europe; Corfu, Cephalonia and Zante, Ionian Islands; Messina, Palermo, and Naples. Will leave Naples November 18 for Leghorn, where she will undergo repairs.

NORTH ATLANTIC STATION.

The following-named vessels were temporarily attached to the North Atlantic station during the year ending November 1, 1874: Wabash, 45 guns; Franklin, 39 guns; Lancaster, 22 guns; Congress, 16 guns; Alaska, 12 guns; Ticonderoga, 11 guns; Shenandoah, 11 guns; Juniata, 8 guns; Wyoming, 6 guns; Dispatch, 4 guns; Canonicus, 2 guns; Mahopac, 2 guns; Manhattan, 2 guns; Saugus, 2 guns; Iris, 2 guns; Yuma, 2 guns; Fortune, 2 guns; and Mayflower, 2 guns.

The following-named vessels were attached to the North Atlantic station, Rear-Admiral J. R. M. Mullany commanding, during the year ending November 1, 1874: Colorado, 46 guns; Worcester, 15 guns; Brooklyn, 20 guns; Powhatan, 17 guns; Canandaigua, 10 guns; Ossipee, 8 guns; Wachusett, 6 guns; Kansas, 3 guns; Shawmut, 3 guns; Pawnee, 2 guns; Pinta, 2 guns; Dictator, 2 guns; and Canonicus, 2 guns.

The following is a synopsis of the movements of the foregoing vessels during the year ending November 1, 1874, including the movements of those vessels temporarily attached to the North Atlantic station during the time they were so attached:

WORCESTER.—The Worcester was at Norfolk November 1, 1873.

Sailed 18th for Key West, and arrived 23d; sailed for Havana January 11, 1874, arriving on 12th, returning to Key West 16th. January 23, sailed on cruise to Cuba and to the Windward Islands. Rear-Admiral Scott having, on the 3d, turned over the chief command of the station to Rear-Admiral Case, visited Havana, Matanzas, Santiago de Cuba, San Domingo City, San Juan de Porto Rico, St. Thomas, Santa Cruz, St. Pierre, Martinique, Bridgetown, Barbados, Port of Spain, Trinidad, Curascao, returning to Havana March 21; thence to Key West on the 1st of April; visited Havana again May 16; left same day for Pensacola, and arrived on 20th at Pensacola; left on the 26th, and on next day anchored off Pass à Loutre, mouth of Mississippi River. Rear-Admiral Scott and staff with other officers visited New Orleans in tug Pinta; returned to Key West June 5. Flag of Rear-Admiral Scott hauled down June 13; that of Rear-Admiral Mullany hoisted June 19; ceased to be flag-ship August 27. September 22, left Key West for New Orleans, arriving on 26th. Flag of Rear-Admiral Mullany shifted to Worcester from Canandaigua on 27th; at New Orleans November 1, 1874.

COLORADO.—The Colorado was put in commission December 2, 1873, and arrived on the station, at Key West, December 21, 1873; participated in naval drill during February following; returned to Key West from Florida Bay 28th February; visited Havana 10th April; at Matanzas from 15th to 23d; touched again at Havana on the 24th, and reached Key West 25th. June 10, sailed for Norfolk, Va., and went into dock. Returned to Key West from Norfolk August 2; at anchor at Key West since then. Rear-Admiral Mullany hoisted his flag on board August 27, hauling it down on board the Worcester. Flag transferred temporarily to Canandaigua September 21, for passage to New Orleans.

WABASH.—Arrived at Key West January 3, 1874, with Rear-Admiral Case on board. Chief command of squadron turned over to him the same day by Rear-Admiral Case; took part, as flag-ship, in the naval drill in Florida Bay during February. Rear-Admiral Case transferred his flag to the Franklin April 1; left for the North, to go out of commission, April 3, touching on way at Havana.

FRANKLIN.—The Franklin was put in commission at Boston Decem- 15, 1873, and arrived at Key West January 2, 1874. Took part in naval drill in Florida Bay during the month of February. Visited Havana during March. Rear-Admiral Case hoisted his flag on board April 1, and sailed for European station April 11, 1874.

LANCASTER.—Arrived on station from Rio de Janeiro, January 25, 1874. Participated in naval drill in Florida Bay during February. Left Key West under tow of Dictator to test power of latter vessel, April 21st, returning next day. Sailed May 16 for South Atlantic station.

BROOKLYN.—The Brooklyn arrived at Key West February 15, 1874. Joined fleet in Florida Bay and participated in naval drill. Left for Pensacola March 12. Touched at Mobile. Returned to Key West April 9. Left for cruise among Windward Islands April 19. Visited islands of St. Thomas, Guadaloupe, Dominica, Martinique, St. Lucia, Barbados, Grenada, and Trinidad, returning to Key West June 10. Left for Pensacola June 30, as convoy to monitors. Returned thence to Key West July 15. On the night of September 21, in attempting to leave the harbor of Key West, under orders to New Orleans, grounded. Got off on the 24th. October 6, sailed for Norfolk, under orders of the Department to go into dry-dock. Arrived there October 18, and is refitting for service as the flag-ship of the South Atlantic station.

CONGRESS.—The Congress arrived from Europe January 6, 1874. Participated in naval drill in Florida Bay during February. Visited Havana during latter part of March. Left for European station April 8.

ALASKA.—The Alaska arrived from Europe January 5, 1874. Participated in naval drill in Florida Bay during February. Visited Havana during latter part of March. Left for European station April 8.

POWHATAN.—The Powhatan, on special service under immediate orders of the Department, convoyed monitor Manhattan to Key West in December, 1873. Returned at once north, and in January, 1874, arrived at Key West with draft of recruits to form crew of the Congress. Convoyed monitor Canonicus to Key West in March. Visited Pensacola, Fla., and Havana, and thence north. Ordered in September to New Orleans, arriving off the city September 30. She remained at New Orleans until November 7, when she proceeded to Norfolk, arriving on the 16th, and will take Rear-Admiral Worden to Lisbon.

TICONDEROGA.—The Ticonderoga arrived from the South Atlantic station January 22, 1874. Participated in naval drill during February, officers and crew having been previously changed. Went north, to Norfolk navy-yard, for repairs to rudder, April 4. Returned to Key West June 6. Yellow fever appearing on board August 12, and again on the 27th, she was ordered to Portsmouth, N. H. She was put out of commission at Portsmouth October 24.

CANANDAIGUA.—The Canandaigua arrived at Santiago de Cuba from Philadelphia, where she had been under repairs, December 19, 1873. Ordered to remain and receive salute that was to have been fired in honor of the United States flag December 25. That ceremony becoming unnecessary by reason of the terms of the protocol between Spain and the United States having been complied with on the part of Spain, left Santiago de Cuba and reached Key West January 21, 1874. Participated in naval drill in Florida Bay during February. Left Key West to visit ports of the Greater Antilles and Virgin Islands. Had visited Mayaguez, Aguadilla, Porto Rico, and Samana, and was proceeding on cruise when she was ordered to return to Samana to remain and look out for American interests there. July 5, having been relieved by the Wachusett, sailed for Key West, touching at San Domingo City and Santiago de Cuba, arriving July 31. Remained at anchor at Key West till September 21, when Rear-Admiral Mullany hoisted his flag temporarily on board and sailed for New Orleans, arriving off the city September 25. Flag hauled down September 27, and transferred to Worcester.

SHENANDOAH.—The Shenandoah arrived from Europe January 22, 1874. Participated in naval drill in Florida Bay during February, left Key West for the north, to go out of commission, April 4, 1874, and was put out of commission April 14.

JUNIATA.—The Juniata arrived at Santiago de Cuba early in December, 1873. Received the survivors of the Virginius on board December 18, and sailed immediately for New York. Left New York as convoy to the Dictator in February, separated from convoy off Savannah, Ga. Reached Key West February 21, and joined fleet exercising in Florida Bay. Touched at Havana March 28, left Key West April 8 for European station.

OSSIPEE.—The Ossipee arrived on station at Key West with the Mahopac December 4, 1873; sailed January 15 for the Tortugas to await arrival of the steamer Virginius, having taken coal-schooner in tow. Left 19th, towing the Virginius. Virginius sinking December 26, proceeded on her way and arrived at New York 30th. Early in Jan-

uary ordered to Washington for officers to testify in the Virginius investigation; 20th January, 1874, left Washington and went to Norfolk. Arrived at Wilmington, Del., February 1. Took the Ajax in tow and left for Key West, arriving 20th. Joined fleet in exercising in Florida Bay. Sailed from Key West April 11, on cruise, visiting Curaçoa, Porto Cabello, Laguayra, Cartahgena, Aspinwall, and Greytown, returning to Key West June 20. June 30, sailed for Pensacola as convoy to monitors; returned to Key West July 12. July 31, sailed for Punta Rassa to recover Government property said to have been stolen. Sailed from Key West September 3, for Samana Bay, to relieve the Wachusett, November 1, at Samana Bay.

WACHUSETT.—The Wachusett arrived from the European station December 31, 1873. Left Key West January 11, 1874, for Cedar Keys, arriving on the 14th. January 18th, took Commodore F. A. Parker on board and returned to Key West. Participated in naval drill in Florida Bay during February. Left Key West March 16 for New Orleans, Commodores Rodgers and Parker on board. Returned to Key West April 4. Left Key West on cruise April 19; visited Havana, Balize, Sisal, Campeche, Frontera, Vera Cruz, Tampico, Galveston, returning to Key West June 2d. Sailed June 10 for Samana, as the relief of the Canandaigua. Returned from Samana to Key West September 15. September 22 got under way to follow flag-ship to New Orleans. The Brooklyn getting aground, remained by her three days to give her assistance. Reached New Orleans September 27. November 1, under orders to return north, to go out of commission.

WYOMING.—The Wyoming was, November 1, 1873, at Aspinwall. Left upon hearing of the capture of the Virginius; touched at Kingston, Jamaica, and reached Santiago de Cuba November 19. Arrived at Key West from Santiago December 10; sailed December 23 for Aspinwall, to convoy the steamer General Sherman, which she had previously taken possession of, to an American port; arrived at Key West with convoy January 22, 1874. Participated in naval drill in Florida Bay during February. Left for Washington navy-yard, to go out of commission, and was put out of commission April 30.

KANSAS.—The Kansas arrived at Santiago de Cuba from the north December 10, 1873; arrived thence at Key West December 25. Participated in naval drill in Florida Bay during February, 1874. Left Key West April 11, to survey on coast of San Domingo, Hayti; surveyed Burne's Shoal, (Bahamas.) Visited Port au Prince, Cayenites, Aux Cayes, and Jacmel, and returned to Key West June 13. June 30, left for Pensacola to convoy monitors there, returning on July 15. August 18, left Key West, and on 21st anchored in Tampa Bay, Florida. Remained there till September 24, when, receiving telegraphic orders, she left for New Orleans, arriving on 28th. At New Orleans November 1, 1874, preparing for cruise in the West Indies and a visit to Aspinwall.

SHAWMUT.—The Shawmut arrived on station from Washington navy-yard, where she had been repairing, April 11, 1874. Sailed on 21st to make surveys on south coast of Cuba. Visited and examined Baitegueri, Guantanamo, Masio, Casalda, Tunas, surveyed Pickle Bank, and searched for La Vela Shoal. Visited Santiago de Cuba, Cienfuegos, and Nuevitas; returned to Key West May 20. June 30, sailed for Pensacola as convoy to monitors; returned July 12 to Key West. Sailed for New Orleans September 22, and arrived off the city on the 25th. At New Orleans November 1, 1874.

DISPATCH.—The Dispatch arrived at Key West from Norfolk Decem-

ber 5, 1873. Sailed for Pensacola December 7. Left on the 12th for Key West, with Lieut. Aulick Palmer, United States Marine Corps, special messenger of the Department, on board, as bearer of dispatches to Rear-Admiral Scott. Arrived on 13th. Sailed on 14th for Bahia Honda, with Capt. W. D. Whiting, commanding the Worcester, and chief of staff, on board, to receive the steamer Virginius. Virginius turned over 16th December, when the Dispatch sailed, towing her, for the Tortugas. Returned to Key West the 19th. Participated in naval drill in Florida Bay during February, 1874. Withdrawn from station first part of April, 1874. Arrived at Norfolk April 15, thence for Washington, arriving on the 21st. In August she conveyed the Naval Committee of the Senate to the several navy-yards on the Atlantic coast, in pursuance of a resolution of the Senate.

PAWNEE.—Was employed as hospital, receiving, and store ship at Key West. Ceased to be used or considered as hospital-ship by virtue of Department's order of July 18, 1874.

DICTATOR.—The Dictator arrived at Key West February 18, 1874, having separated from her convoy, the Juniata, off Savannah, Ga. Twenty-first of April made test of towing-power on the Lancaster, attaining a speed of six knots. Lying at anchor since then at Key West.

AJAX.—The Ajax arrived at Key West February 20, 1874, convoyed by the Ossipee. Remained till June 30, when she sailed under convoy for Pensacola, to be laid up.

CANONICUS.—The Canonicus arrived at Key West, from Philadelphia, March 17, 1874, in tow of the Powhatan. Remained at Key West until June 30, when she sailed under convoy for Pensacola, Fla., to be laid up. Arrived from Pensacola at quarantine station, Mississippi River, October 5. Came up to city of New Orleans October 28, to be kept in commission.

MAHOPAC.—The Mahopac arrived in tow of the Ossipee December 4, 1873, at Key West; lay there until June 30, when she left under convoy for Pensacola, to be laid up.

MANHATTAN.—The Manhattan arrived December 21, 1873, in tow of the Powhatan, at Key West; lay at Key West until June 30, 1874, when she left under convoy for Pensacola, Fla., to be laid up.

SAUGUS.—The Saugus arrived at Key West November 21, 1873, where she remained at anchor until March 11, when she left harbor for exercise, returning same day; sailed 30th July, 1874, for Pensacola, under convoy, to be laid up.

IRIS AND YUMA.—The Iris and Yuma were put in temporary commission at New Orleans September 17, 1874; laid up again October 5.

FORTUNE.—The Fortune arrived December 5, 1873, at Key West: sailed the 16th with directions to assist, if necessary, in towing the Virginius. Returned 19th, and left same day for Santiago de Cuba with Department's orders regarding salute to the United States flag. Touched at Matanzas 27th for two convicts escaped from the Tortugas. Left Key West on detached service April 5, 1874, for survey of Mexican coast in the neighborhood of Vera Cruz. Touched at Key West in July on way north. Arrived at Washington and refitted, and proceeded thence, October 29, to Philadelphia, which latter port she left November, for the Gulf, to engage on special duty.

MAYFLOWER.—The Mayflower arrived at Key West from Norfolk December 22, 1873. Participated in naval drill in Florida Bay during February, 1874. Left for Washington April 8, 1874, and arrived April 23.

PINTA.—The Pinta arrived at Key West December 4, 1873. Left

for Havana December 13, with special messenger of the Department *en route* to Santiago de Cuba on board. Landed him at Havana, and then proceeded to Santiago with duplicate of protocol between Spain and the United States in reference to the Virginius affair, for delivery to the senior naval officer there present. Returned to Key West December 22. Sailed for Havana 24th, returning on the 28th. Employed during naval drill in Florida Bay as dispatch-boat, keeping up communication with Key West. Assisted telegraph company at intervals during April in repairing cable. Arrived at Pensacola May 24, and accompanied the Worcester, as tender, to mouth of the Mississippi River, taking Rear-Admiral Scott and other officers up to New Orleans; returned to Key West June 5. June 30 went to Pensacola as convoy to monitors, and returned July 9. Employed generally throughout the year as tug and dispatch boat.

SOUTH ATLANTIC STATION.

The vessels now on this station are the Lancaster, (flag-ship,) 22 guns, Monongahela, 11 guns, and Wasp, 1 gun. The movements of the vessels during the past year have been as follows:

August 28, 1873, the *Lancaster* left Rio de Janeiro on a cruise to Bahia, coast of Brazil, and arrived at Bahia September 16; on the 29th of September she left for Rio de Janeiro, arriving there October 7. December 23 she left for Key West, Fla., and arrived on the 25th of January, 1874, having touched at St. Thomas, West Indies. From January 25, 1874, to May 11, she was serving in the Key West fleet in Florida Bay, the Gulf, and at Key West. May 12 she left the bar at Key West and proceeded to her station in the South Atlantic, taking the route of 38° north latitude to the vicinity of the Azores, thence to Cape de Verd Islands, (sighting them,) thence across the line in longitude 26° west, thence to Rio de Janeiro, on July 11, sixty-one days out. July 12 she hoisted the flag of Rear-Admiral Strong, and on August 1 exchanged to that of Rear-Admiral LeRoy. Since her arrival in Rio de Janeiro she has been employed refitting, repairing, getting ready for service, and performing the usual port duties. She was reported ready for sea September 1, and expected to sail about the 1st of November for the La Plata.

The *Monongahela* arrived at Rio de Janeiro on the 22d December, 1873, and on the following day hoisted the flag of Rear-Admiral J. H. Strong, commanding the United States naval force on the South Atlantic station. On the 8th February, 1874, she proceeded to Ilha Grande Bay for exercise with torpedoes, &c., where she remained until the 16th of the same month, when she returned to Rio de Janeiro. On the 26th February she proceeded to the port of St. Catherine's under sail and communicated with the American consul, reaching that port on March 3, and remaining until March 5, when she returned to Rio on the 9th March, remaining as flag-ship. On the 1st of April she proceeded to sea, touching at Cabo Frio on the 14th, and remaining at that point until the 16th; returning to Rio on the 18th, she remained until the 29th, on which date she again proceeded to Cabo Frio, and anchoring in that port remained until May 17, when she returned to Rio, arriving on the 18th, and remained until the 29th of July, upon which date she proceeded to Santos, reaching that port on the 31st of July and remaining until August 1, when she returned to Rio, touching at Ilha Grande Bay on the 2d, and arriving at Rio on the 6th. On the 11th of August the United States steamer Lancaster arrived at Rio, and on the following day the flag of Rear-Admiral Strong was transferred to that vessel.

October 1 she sailed from Rio for the Kergueland Islands for the purpose of taking on board the party stationed at that point to observe the transit of Venus. She will return to Rio after the performance of this service.

The *Wasp* left Montevideo for Ascuncion, Paraguay, September 15, 1873, calling at Buenos Ayres to receive on board General White, United States minister to the Argentine Confederation.

October 31, 1873, she returned to Montevideo and remained there until November 30. From November 30, 1873, to July 31, 1874, she was engaged in surveying the coast between Montevideo and the island of Flores. During this time an area of about seventy square miles was surveyed in that area, between nine hundred and a thousand miles of soundings were run, and over forty thousand casts of the lead taken. In July she visited Buenos Ayres for a week. September 25, 1874, she left Montevideo for Buenos Ayres, disturbances of a political character having arisen in the Argentine Confederation, and was there at last accounts.

The *Ticonderoga*, 11 guns, was detached from the station and left Rio for the United States on the 30th of November, 1873. She was intercepted by orders at St. Thomas, and in pursuance thereof reported at Key West January 22, 1874, for duty on the North Atlantic station.

The *Brooklyn*, now refitting at Norfolk, will sail at an early day for Rio to relieve the Lancaster as flag-ship of the station.

NORTH PACIFIC STATION.

The force on this station, under the command of Rear-Admiral John J. Almy, consists at present of the Pensacola, (flag-ship,) 22 guns; Benicia, 12 guns; Portsmouth, 14 guns; Tuscarora, 6 guns; Saranac, 11 guns; and Narragansett, 5 guns.

The Richmond, attached to the station in the early part of the year, has been transferred to the South Pacific station.

The movements and proceedings of the vessels have been as follows:

Saranac, second-rate, wooden, paddle, 11 guns. In October, 1873, the Saranac, under the command of Capt. J. C. P. de Krafst, sailed from San Francisco for the Hawaiian Islands, bearing the flag of Rear-Admiral A. M. Pennock, commanding the station. Remained at Honolulu until the 21st of December, when she returned to San Francisco, arriving on the 3d of January, 1874.

In February, 20th, proceeded on a cruise, under the command of Capt. Thomas Pattison, to Mexico and Central America, visiting San Blas, Acapulco, and Panama. Remained at Panama and vicinity, acting under orders from the honorable Secretary of the Navy, engaged in special service connected with the Darien Canal commissioners, with Commander Selfridge, U. S. N. On the 18th of May Rear-Admiral John J. Almy assumed command of the North Pacific station, *vice* Rear-Admiral A. M. Pennock, and hoisted his flag on this vessel. On the 21st of May, having completed her duties at Panama, the Saranac sailed for San Francisco, calling at Acapulco, Mexico, and San Diego, Cal. On the 21st of June arrived at San Francisco, and on the 23d of the same month steamed to navy-yard, Mare Island, at which place she remained, undergoing repairs, &c., and preparing for sea, until the 19th of September. On the 17th of September Rear-Admiral Almy changed his flag from this vessel to the Pensacola, in consequence of an intended cruise the vessel was to be sent upon. On the 19th of September the Saranac, under command of Capt. W. W. Queen, sailed for Lower Cali-

fornia, to investigate certain reported outrages upon American citizens in the vicinity of La Paz, Lower California. Upon the completion of this she will visit, probably, Guayamas, Mazatlan, and San Blas, calling at La Paz on her return. Was heard from at La Paz on the 17th of October.

PENSACOLA, second-rate screw, wooden, 22 guns. This vessel, under the command of Capt. A. K. Hughes, arrived at San Francisco on the 8th of June, 1874, fifty-one days from Callao, Peru, and on the 10th of the month steamed to Mare Island, since which time she has been repairing and receiving a general overhauling. Rear-Admiral Almy hoisted his flag on board of the Pensacola on the 17th of September, having changed from the Saranac.

The officers and crew have been attached to the vessel during the time she has been at the navy-yard, and have been constantly employed on work connected with the vessel. They have overhauled and refitted the rigging, repaired the masts, &c., and overhauled the gun-carriages and other work in the gunner's department. The engineer's departments have also been constantly employed in such a manner as has rendered valuable assistance.

RICHMOND, second-rate screw, wooden, 14 guns. In January, 1874, the Richmond, under the command of Capt. Thomas Pattison, arrived at San Francisco from Philadelphia, and joined the naval forces under the command of Rear-Admiral A. M. Pennock, as flag-ship of the station, Capt. J. C. P. Dekrafft relieving Captain Pattison of the command. During the months of January and February, received necessary repairs at the navy-yard, and in March proceeded from Mare Island to San Francisco, at which place remained at anchor until the 21st of May, when she sailed for Panama, under the command of Commander B. Gherardi, to become the flag-ship of the South Pacific station.

BENICIA, second-rate, wooden, screw, 12 guns. This vessel, under the command of Capt. A. G. Clary, was at Panama during the months of October, November, and December, 1873. While at that place took active part co-operating with the United States steamer Pensacola (then flag-ship of the South Pacific station) in protecting American citizens and their property during the revolution in the fall of 1873. In January, 1874, Capt. William E. Hopkins relieved Capt. A. G. Clary of the command and sailed for the Hawaiian Islands, arriving at Honolulu in February, since which time she has remained there, making, at intervals, short cruises to and from the various islands of the group. Authority has been given for the Benicia to convey the king of the Hawaiian Islands to San Francisco, if his Majesty so desires it, and it is expected that she will sail about the middle of November.

PORTSMOUTH, third-rate, wooden, sails, 14 guns. This vessel was attached to the United States naval force on the North Pacific station in the month of May, 1874, previous to which date she had been engaged in special service in the North Pacific Ocean, on surveying duty. Immediately after joining this squadron she was hauled alongside the dock at the navy-yard and remained there, undergoing repairs and alterations, until the 18th of August, when she hauled into the stream; from that date, engaged in preparing for sea, and on the 14th day of September, by order of the Navy Department, sailed for Alaska, carrying a committee of Icelanders (3) to ascertain the feasibility of establishing an Icelandic colony in that territory.

TUSCARORA, third-rate, wooden, screw, 6 guns. This vessel for the past year has been engaged in surveying duty in the North Pacific

Ocean, under the command of Commander George E. Belknap. On the 11th of October the Tuscarora became attached to the North Pacific station, Commander H. Erben assuming the command. She remained at Mare Island, prepared for sea, under orders for Honolulu, as the relief of the Benicia, awaiting special orders from the Navy Department, until the 30th of October, when she sailed for the Hawaiian Islands. On her way to Honolulu, she will run a line of soundings, at distances apart of 30 miles.

NARRAGANSETT, Commander George Dewey. Although not *attached* to the North Pacific squadron, the Narragansett has been on the station for the past year, engaged on special services, surveying.

SOUTH PACIFIC STATION.

The vessels now on this station are the Richmond, flag-ship, 14 guns, Omaha, 12 guns, and Onward, 3 guns. The movements of the vessels have been as follows:

RICHMOND, flag-ship. The Richmond arrived at Valparaiso, October 4, 1873; thence 25th, arriving at San Francisco December 4; thence the 6th, arriving at Mare Island on the same day. Sailed from Mare Island January 14, 1874, bearing the flag of Rear-Admiral A. M. Pennock, who assumed command of the South Pacific station January 31, 1874, and arrived at San Francisco March 4. On the 28th of April Rear-Admiral Pennock hauled down his flag, and on the 29th of April she sailed for and arrived at Mazatlan May the 30th, having stopped two days at Magdalena Bay; thence June 6, arriving at Panama the 30th; sailed August 3d, arriving at Tobago Island September 14, having received, August 11, 1874, Rear-Admiral Napoleon Collins, who hoisted his flag on that day as commander of the South Pacific station. Sailed on the same day and arrived at Panama the 28th.

OMAHA.—The Omaha sailed from Coquimbo, September 1, 1873, and arrived at Valparaiso the 11th; thence October 28, arriving at Juan Fernandez October 31. Sailed November 2, and arrived at Caldera the 5th; thence the 10th, arriving at Arica the 17th. Left Arica November 20, and arrived at Callao the 26th. Sailed from Callao December 7, and arrived at Panama the 20th. Left Panama January 26, 1874, and arrived at Tobago Island on the same day; thence February 5, arriving on the same day at Panama. Sailed from Panama February 6, and arrived at Callao March 25. Remained at Callao until April 25, when she sailed, arriving on the same day at Chorillos. Left Chorillos April 29, arriving the same day at Callao; thence May 22, arriving at Panama the 13th; thence the 22d, arriving at Guayaquil, June 24. Left July 7, arriving at Payta the 12th. Sailed August 16, arriving at Callao September 2.

PENSACOLA.—On the 23d of October, 1873, the Pensacola, 22 guns, then attached to this station as flag-ship, sailed from Panama to Callao, where she remained, cruising at intervals on the coasts of Chili and Peru, until April 18, 1874, when Rear-Admiral John J. Almy having shifted his flag to the Omaha, she sailed for Mare Island to receive new boilers.

ONWARD.—The Onward has been stationed during the past year at Callao, Peru, as store-ship for the South Pacific station.

ASIATIC STATION.

The following vessels comprise the force now on the Asiatic station: Hartford, (flag-ship,) 18 guns; Monocacy, 6 guns; Saco, 3 guns; Lack-

awanna, 10 guns; Palos, 6 guns; Yantic, 3 guns; Kearsage, 6 guns; Ashuelot, 6 guns.

The movements of the vessels on this station during the past year have been as follows

The *Hartford* arrived at Hong-Kong December 8, 1873, and sailed thence January 15, 1874, arriving at Macao on the 16th. Left Macao on the 2d of February, and arrived at Hong-Kong the same day; thence the 10th of April for Yokohama, via Nagasaki—for the purpose of coaling—and the Inland Sea, reaching Yokohama on the 21st of April. Sailed from Yokohama July 11, and arrived at Kobe July 13; thence July 27, visiting four of the harbors of the Inland Sea, viz: Uchi-no-uma, off Yoko Island, Simma-saki Straits, Furnice Bay, arriving at Nagasaki July 31.

The repairs to the *Monocacy* having been completed, she left Yokohama December 2, 1873, and arrived at Shanghai on the 8th; thence, the 9th of December, and arrived at Hong-Kong on the 13th of January, 1874. Left Hong-Kong for Macao on the 28th, arriving on the same day; thence, the 31st of January, back to Hong-Kong. Sailed for Saigon on the 5th of February, arriving on the 9th; thence the 12th, and arrived at Bangkok on the 16th; thence on the 27th of February, and arrived at Singapore March 3. Left Singapore March 11, and arrived at Manila the 20th, remaining until March 30, when she sailed for Hong-Kong, arriving on the 4th of April. Leaving Hong-Kong on the 14th of April, she arrived at Amoy on the 18th; thence the 23d of April, arriving at Kelung the 26th; thence the 27th for Tamsui, arriving on the same day. Left Tamsui on the 28th of April and arrived at Tainampoo on the 29th; thence on the 30th of April, arriving at Takow on the same day. Left May 2 for Amoy, arriving on the 3d. Remained at Amoy until the 27th of May, when she sailed for Lian-Kean Bay, arriving on the 28th; thence for Amoy, which she reached on the 29th. Sailed thence on the 29th of June, and arrived at Tsing-Sui Island on the 30th. On the day of her arrival, she sailed for and reached Amoy, where she remained until the 25th of July, when she left and arrived at Foochow on the 26th; thence on the 28th, arriving at Shanghai the 30th of July for repairs.

The *Saco* remained at Yokohama from the 15th of September, 1873, until the 22d of May, 1874, when she sailed and arrived at Nagasaki on the 27th. On the following day she left and arrived at Che-foo on the 1st of June; thence July 19, and arrived at Nagasaki on the 26th. Left September 3d for Shanghai, in order to make necessary repairs to machinery and boilers, arriving September 6.

The *Lackawanna* arrived at Nagasaki October 30, 1873, where she remained until January 15, 1874; thence to Shanghai, arriving on the 19th. Left February 23 for Nagasaki, where she arrived on the 26th. Sailed April 3 for Hong-Kong, arriving the 9th; thence April 21 for Nagasaki, arriving the 30th. Sailed May 3 for Yokahama, arriving the 7th. Left July 3 for Kobe, which she reached the 6th; thence the 14th, and arrived at Nagasaki the 21st; thence August 20 for Yokohama where she reached the 29th, for the purpose of undergoing repairs.

The *Palos* having been repaired at Yokoska, left that port November 28, 1873, and arrived the same day at Yokohama; thence December 11 for Nagasaki, arriving the 16th; thence the 20th for Shanghai, arriving the 23d. Sailed from Shanghai February 12, 1874, arriving at Nagasaki the 15th. Left Nagasaki April 18, and arrived at Che-foo the 22d. Remained at Che-foo until June 17, when she sailed for Tungschow, arriving the 18th; thence the 19th for Che-foo, arriving the 20th;

thence July 7 for Tien-Tsin, where she reached on the 8th; thence August 8 for Nienchwang, arriving the 11th. Sailed the 28th, arriving at Chefoo on the 29th, *en route* for Tien-Tsin, to remain for the winter.

The *Yantic* sailed from Shanghai October 20, 1873, calling at Amoy from the 23d to the 25th; Swatow from the 26th to the 28th, reaching Hong-Kong on the 29th; thence November 11 for Manila, arriving the 14th; thence the 22d for Ilo Ilo, arriving the 24th. Sailed on the 29th for Zebu, arriving on the 30th; thence December 6, calling at Soo-loo from the 8th to the 9th; Labuan from the 13th to the 15th; Brunai River from the 15th to the 18th; Labuan from the 18th to the 22d; Batana from the 30th to the 9th of January, 1874, when she left and arrived at Singapore the 14th. Sailed February 13, for Royalist Haven, arriving the 16th; thence April 19th for Labuan, arriving the 22d; thence the 25th for Saigon, arriving March 8. Left Saigon March 14, and arrived at Cocoanut Bay on the same day. Sailed the 25th and reached Hong-Kong April 1; thence April 10 for Canton; thence back to Hong-Kong, arriving the 17th. Sailed from Hong-Kong April 25, and arrived at Shanghai May 3; thence July 13, arriving at Nagasaki the 16th; thence July 20 for Amoy, arriving the 24th.

The *Kearsarge* sailed from San Francisco March 4, 1874, stopping at Honolulu eight days, and arrived at Yokohama May 11, where she remained until August 13, when she sailed for Nagasaki, arriving the 18th; thence September 11 for Vladovostok, with Professor Hall's scientific party, arriving on the 8th.

The *Ashuelot* left Yokoska November 23, 1873, for Yokohama, arriving on the same day, where she remained until April 10, 1874, when she left for Nagasaki, arriving on the 15th; thence the 18th for Shanghai, arriving on the 21st. Sailed May 8 and arrived at Nankin on the 21st; thence May 25, stopping at Kinkiang two days, Hankon eleven days, Nienchwang one day, Takon one day, Ichang eighteen days, returning to Shanghai July 21. Sailed August 3, and reached Nagasaki on the 5th. Left September 3, and arrived at Tien-Tsin the 8th, with Professor Watson's scientific party.

APPENDIX

No. 1.

ESTIMATES SECRETARY'S OFFICE, &c.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Navy Department building.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1874.
SALARIES.		
For salary of superintendent, (appropriated, 17 Stat. at L., p. 502, sec. 1)....	$250 00	
For salaries of five watchmen, at $720 each, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3).....	3,600 00	
For salaries of two laborers, at $720 each, per act of March 2, 1865, (13 Stat. at L., p. 454, sec. 1,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3)	1,440 00	
CONTINGENT EXPENSES.	5,290 00	$5,290 00
For incidental labor, fuel, lights, and miscellaneous items, (appropriated, 17 Stat. at L., p. 502, sec. 1)	7,000 00	7,000 00
NAVY.		
CONTINGENT EXPENSES.		
Rent and furniture of buildings and offices not in navy-yards; expenses of courts-martial and courts of inquiry, boards of investigation, examining boards, with clerks' and witnesses' fees, and traveling expenses and costs; stationery and recording; expenses of purchasing paymasters' offices at the various cities, including clerks, furniture, fuel, stationery, and incidental expenses; newspapers and advertising; foreign postage; telegraphing, foreign and domestic; copying; mail and express wagons, and livery and express fees, and freight; all books for the use of the Navy; experts' fees, and costs of suits; commissions, warrants, diplomas, and discharges; relief of vessels in distress, and pilotage; recovery of valuables from shipwrecks; quarantine expenses; care and transportation of the dead; reports, professional investigation, and information from abroad; and all other emergencies and extraordinary expenses arising at home or abroad, but impossible to be anticipated or classified, (appropriated, 17 Stat. at L., p. 547, sec. 1)	125,000 00	100,000 00

No. 2.

NAVAL ACADEMY.

REPORT OF THE BOARD OF VISITORS.

UNITED STATES NAVAL ACADEMY,
June 1, 1874.

SIR: The Board of Visitors, having attended the examination which has just closed at this academy, submits for your information the following report:

The board entered upon its duties on the morning of May 20, and organized by the selection of Rear-Admiral William Reynolds, United

States Navy, as president, A. A. Sargent, United States Senate, as vice-president, and Prof. N. M. Terry, United States Naval Academy, as secretary.

For the purpose of observing the examinations in progress, and securing a proper insight into the "discipline, police, and general management of the academy," as well as of its present and future needs, the board divided itself into committees.

These committees examined in detail the matters assigned to them, and reported to the board verbally and in writing the results of their investigations.

The superintendent was invited to attend the meetings of the board whenever he might deem it advisable, and specially to bring before it such matters as he might regard worthy of its attention. He was also formally requested to cause the heads of the various departments of instruction and administration to present their views, in writing, upon all questions pertaining to the improvement of their respective departments. It is but proper to say that all the officers and instructors of the academy cheerfully co-operated in assisting the board of visitors in their labors, and hence the board feels justified in saying that its conclusions are based upon as thorough an understanding of the subjects under consideration as could be had in the short time allowed.

The board is unanimous in commending the high state of efficiency the Academy has reached in all its departments, and in saying that it is in every way worthy of the Government and the country. Its administration under Rear-Admiral Worden, and his worthy predecessors, has been such as to secure a high degree of moral and intellectual development among the young men committed to their care, and the board does not doubt that the cadets of the academy are now as free from vicious habits and practices, and are controlled by as high a standard of morals and honor as the students of any educational institution in this country. The board thus commends the moral tone of the academy after examination and especial consideration, their attention having been particularly directed to this subject by some criticisms of a part of the public press, which are unfounded. The board believes the cadets are under the best influences, and the results are fairly shown by their general good conduct.

The suggestions and recommendations submitted by the board must not, therefore, be understood as reflecting upon the administration, but rather as indicating the means by which the admirable system of education already adopted and in successful application may be still further improved.

The conclusions and recommendations of the board are embraced in the following subdivisions, corresponding to the principal committees into which the board was divided:

1.—GROUNDS AND BUILDINGS.

The grounds are well kept and admirably policed, and have been considerably extended by the purchase of a lot of land adjoining the old grounds on the north, and next to the river. It is difficult to see wherein they need at present to be further enlarged, though it is believed that the square lying southwestwardly of the grounds could, if bought, at some future day be used to the advantage of the institution.

The buildings are in the main well designed, and are generally sufficiently commodious for the purposes for which they are used. This board, however, fully concurs in the recommendations of the previous board in reference to the vacation of that part of the barracks now used

for kitchen and laundry purposes, and the construction of a building specially designed for those uses; also in reference to a new armory, and the enlargement of the buildings occupied by the departments of "Steam-Engineering," and "Physics and Chemistry."

It is gratified to find that provision has been made for the systematic instruction of the students in swimming and aquatic gymnastics, and that the superintendent has regarded it as fully within his discretion to issue the necessary orders and detail a proper instructor for the organization of the exercises and instruction in this department, without asking for a special appropriation.

The board is also of the opinion that provision for securing the proper ventilation of the cadets' barracks and recitation-rooms should be made under the surpervision of a competent architect.

All the rooms visited were found to be heated by steam, and to be ventilated through the doors and windows, and while there is no doubt that plenty of air can be had by these means, there is equally no doubt that such means are not compatible with proper sanitary regulations.

It is well known that they are productive of draughts, accompanied by extremes of heat and cold, and followed frequently by colds, coughs, and even graver diseases. It is recommended also that application be made to Congress for an appropriation sufficient to establish suitable quarters for officers of the school, who are now obliged to seek quarters in the town outside of the institution grounds. The recommendation is strongly made, since all our examinations show that the officers connected with the institution should reside within its grounds.

COURSE OF STUDY.

The board is of the opinion that the appointments of candidates should be made one year in advance of their entry into the academy, as is now required by law at West Point, and that no one shall be admitted into the academy who has not attained the age of 16 years, or who is over 18 years of age.

2d. The board is of the opinion that instruction in vocal music should be furnished to all the classes, as often as once a week, during the entire academic term.

The object of this is not only to furnish an accomplishment, the value of which is so generally appreciated, but to strengthen and cultivate the voice for the uses of actual service. Incidentally it may be stated that chorus and solo singing is a social enjoyment, which has a refining and purifying influence upon young men entirely disproportioned to the cost of the instruction necessary for its attainment.

3d. The board is also of the opinion that a course of instruction in naval (and, if possible, military) history should be established for the highest class at least, and that this course should include the history of navies and maritime warfare, with an explanation of the principles of naval tactics and strategy, as shown in the great naval battles of ancient and modern times. Particular attention should be paid to the naval history of the United States.

It is believed that there are several officers in the Navy at present amply qualified to prepare a text-book, or a course of lectures, which would embody everything essential in this branch of a naval officer's education, and point the way for investigations and study after graduation.

4th. The board also suggests and strongly recommends that the principles of iron-ship-building shall be incorporated into the course of instruction. This could probably be most advantageously done by

extending the instruction now given in reference to the principles of wooden-ship-building and naval construction. In this connection the board begs to submit the following suggestion in reference to the extension of the course of steam-engineering:

The act of Congress, approved July 4, 1864, provides that the "cadet-engineers who are graduated with credit in the scientific and mechanical class of the Naval Academy, may, upon the recommendation of the academic board, be immediately appointed by the Secretary of the Navy as assistant naval constructors."

In order to carry out the obvious intention of this wise provision of the law, the board recommends that the course of instruction now assigned to the cadet-engineers, be extended so as to include the "theory and practice of iron-ship-building," and beg leave to renew the recommendation of the Board of Visitors of last year in regard to the enlargement of the buildings devoted to steam-engineering.

5th. In the department of seamanship, the course of instruction pursued at present seems to meet all the demands in this important branch of the education of a naval officer, and no change is recommended in the system now in vogue.

The cadet-midshipmen have every opportunity afforded them to acquire a practical knowledge of the details of the duties of seamen and of officers, and the very satisfactory results of their examinations and the proficiency of their drills in the exercise of sails, spars, and boats, are good evidence that they have not failed to improve the very great advantages offered by the academy in these particulars.

Their exercises at the "great guns," and at "quarters" on board the Santee, at the howitzers and mortars, fencing, at signals, and as infantry, were most admirably performed, and deserve the highest commendation of the board.

Their proficiency in object and lineal drawing, the study of navigation, in nautical surveying, and in steam-engineering, is quite in keeping with their progress in the other branches of their profession already noticed.

After completing a four-years' course of study and exercises at the academy, and having had the experience at sea of the practice-cruises during the summer months, the midshipman, by his further service at sea in cruising ships of war for two years, as is now the rule of the Department under the law extending the term of instruction, should not fail to deserve his promotion, as a highly-educated officer of the Navy, on undergoing his final examination at the end of his six years of study and of service.

In order, however, to further improve the period of two years of service at sea in cruising-ships, the board recommends that a course of reading and study be pursued in naval tactics and strategy, international law, the law and practice of courts-martial, naval and general history and the modern languages, that shall be in advance of the standard as now fixed in those branches for the graduating class, so that a stimulus to acquire further proficiency in those branches shall not be wanting after the midshipman leaves the academy.

6th. During our examination, our attention has been called to the advisability of exempting the fourth-class cadet-midshipmen from the study of French, and of including the study of Spanish in two years of the course instead of one. The reasons given seem to have weight, and have so impressed us that we ask your attention to the subject, as the whole matter is within the control of the academic board, to whom it may be properly referred.

7th. The instruction in mathematics, chemistry, history, drawing, law,

anguages, ethics, and religious instruction, is commended for the faithfulness with which the various instructors have performed their duties, the ready and courteous facilities given the committee to hear and see their method of teaching and the progress of the several classes.

The young gentlemen have also shown a commendable degree of progress in their studies, as a rule, and if some have failed, it is due rather to their neglect of their high opportunities, or to deficiency in preparatory training, and not to any remissness or want of sympathy on the part of their instructors.

In the department of law, the progress of the pupils has been highly commendable, and their written examinations on "international and maritime law" have been generally of a high order of merit, and would be creditable to the graduates or any law-school. We believe that a course in the law of naval courts-martial might be profitably added to the present course.

The course of practical instruction in seamanship and naval tactics, and in steam-enginery, would be materially advanced by having stationed at the academy, instead of the Dale, a modern steam sloop-of-war, with light spar-deck; and in place of the boats for naval tactics, at least six steam-launches, similar throughout.

With these means in use, there would be no reason why excellent deck-officers and practical engineers should not be found at the academy, in addition to the already well-trained theoretical students.

This suggestion is based upon the earnest recommendation of the superintendent of the academy.

The proficiency of the cadet-engineers in all the branches of steam-engineering embraced in the course in use at the academy, including drawing—as developed by their oral and written examinations, and as exhibited by the specimens of the latter—is highly satisfactory. The use of working-models, and other various appliances for exhibiting the operation of steam-machinery, under competent instruction, gives to these young gentlemen sufficient opportunities to perfect themselves in their branch of the naval profession, and it is quite evident to the board that these opportunities are well improved.

The cadet-engineers share in all the studies and exercises of the cadet-midshipmen, except those pertaining to seamanship, gunnery, and navigation, and have, also, the advantage of making a practice-cruise during the summer months, in a screw-steamer, as an equivalent to the cruise of the cadet-midshipmen in a sailing-ship.

FINANCES.

The board are able to add nothing to the report made by the Board of Visitors of 1872, on the subject of the management of the financial affairs of the academy, and heartily concur in the commendation therein expressed, as to the clear and orderly manner in which all the accounts are kept.

LIBRARY.

The board has visited the library of the academy, and find the same kept in admirable order, and every facility offered the officers and students to improve their leisure hours.

DISCIPLINE.

While commending in the most cordial terms the general discipline of the academy, the board desires to invite your attention to several points which it deems of vital importance.

The attention of the country has been strongly directed of late years to the matter of "hazing." The board has no hesitancy in saying that

there is no difficulty in putting a complete stop to this disgraceful practice, if the proper authority to act be given to the Academic Board.

The board recommends the enactment of a law requiring the Secretary of the Navy to dismiss, on the recommendation of the Academic Board, any student guilty of cruelty to comrades; and that such dismissed person shall be henceforth ineligible to re-appointment in the academy.

2. The object of the demerit system is, or ought to be, purely to discipline the youths of the academy. In the opinion of the board it should be applied not so much with the idea of accumulating demerits against individuals, as to teach them how to control themselves by the observance of laws and regulations, and to enable the authorities to make comparison between the members. The feature of the system in operation here, which lessens the number of demerits which the members of the different classes can get as they become older in the institution, is one perfectly proper and just.

Youths, especially without experience, when entering upon a course of life new to them, err frequently from ignorance and heedlessness, as well as from defective early training. As they advance in years they do not always improve in this respect, more especially if no additional inducement is offered to them. It is believed that, with the majority of the young men who enter this institution, the hope of reward is a more powerful incentive than the fear of punishment.

In addition to this, the road for reform should be left open even to the last moment. It is therefore recommended that the regulation which now authorizes the superintendent to remove a certain number of demerits, whenever it appears that a student shall have become worthy of it by good conduct, shall be continually enforced, and still further extended by removing, say 20 or 25 demerits when a student—

1st. Shall have been selected at, say, four successive inspections as the "most proficient of his class in drills at seamanship."

2d. Shall have been reported by his instructor, say, four successive weeks as the "best behaved member in his recitation-room."

There is another matter which affects the subject of discipline in a marked manner: the habit which some parents have of sending their sons large sums of money for use at the academy. The theory of the institution, and its practice, so far as the authorities here can carry it out, is to maintain perfect equality between the students. The pay of the cadet is ample for providing him with everything he needs at the academy, besides giving him a reserved fund with which to purchase his officer's outfit when he graduates.

With economy he can do even better than this, and save a portion of his pay. The amount of pay still due the corps of cadet midshipmen, over all expenses, is now $11,422.83, exclusive of the pay reserved for equipment, which amounts to $45,826.99.

It will be seen from this statement how totally unnecessary any outside pecuniary assistance is; and when it is considered what objectionable habits of extravagance are induced by the action of parents and guardians in furnishing money to their sons or wards, that they are not only acting in violation of the regulations of the academy, but creating a distinction between their own sons and their comrades whose parents have not the means for similar indulgence; it is obvious how deleterious the practice is to the welfare of the academy.

So strongly are the members of the board impressed with the importance of this subject that they think every means should be taken to prevent students from receiving money from abroad, and recommend that it be made a condition to all appointments in the academy that the parents or guardians shall bind themselves not to send, or permit to

be sent to the students any money without the consent of the superintendent, and in no case to remit any funds except through the superintendent.

The attention of the board has been directed to the practice among some of the students of running up debts with merchants and others in the city of Annapolis, and paying the same at the time of their graduation out of their "reserved pay."

The board thinks, as it has heretofore said, that the pay of the students of the academy is quite sufficient for all necessary purposes, and that the practice of making debts in this way is calculated to inculcate habits of extravagance that follow the officer after his graduation and promotion into the Navy.

The board, therefore, recommends that the practice be forbidden, and that such action be taken as will effectually end it.

The board recommends that no permission to use tobacco in any form be given any cadet while in attendance at the academy. It is almost universally conceded that the habit of using tobacco is a bad one, and young men should therefore be kept from its influence as long as possible. In the opinion of the board the plea that, if permission be not given, the habit will be surreptitiously indulged, does not justify the giving of such permission. The same plea would excuse any other bad habit, the use of intoxicating drinks or licentiousness.

If the use of tobacco be forbidden to the cadets the greater portion of them will obey the regulation, and thus be saved from a pernicious habit. Besides, we doubt if perfect good faith to the parents who intrust their children to the fostering care of the Government at the academy comports with the encouragement of any habit in the cadets which the parents themselves generally would forbid, if they could.

The board recommends a small appropriation for the construction of glass cases for the preservation of the battle-flags of foreign wars, now deposited at the academy. These trophies, for the want of such protection, are rapidly going to decay from moth and dust.

The board recommends that all heads of Departments, except those purely professional, be made permanent on a like footing and with similar advantages as to rank and pay as those at West Point.

Respectfully submitted.

WM. REYNOLDS,
Rear-Admiral U. S. N. and President of the Board.
A. A. SARGENT.
EUGENE HALE.
JOHN GIBBON,
Brevet Maj. Genl., U. S. A.
WILLIAM AIKEN.
LEWIS E. PARSONS.
JNO. P. VINCENT,
Prest. Judge 6th Dist. Pa.
DAVID P. DYER.
W. H. MORGAN, of Mo.
J. L. G. McKOWN, D. D.
J. H. WILSON.
W. H. SHOCK,
Chief Engineer, U. S. N.
S. B. LUCE,
Captain, U. S. N.

Attest:
N. M. TERRY, *Secretary.*

REPORT OF SUPERINTENDENT NAVAL ACADEMY.

No. 182.] UNITED STATES NAVAL ACADEMY,
Annapolis, Md., October 31, 1874.

SIR: I have the honor to report that, in obedience to the orders of the Department, my flag was hoisted here on the 22d ultimo, Capt. K. R. Breese, the commandant of midshipmen, remaining in command during my absence on special duty until the 29th of the same month, when I assumed the duties of superintendent.

At that time the practice-ship Constellation and steamer Mayflower had already arrived from their summer's cruise, the students had been disembarked and gone into quarters, and the examination for the admission of candidates was in progress and nearly concluded.

The admirable condition and very high state of efficiency in which the Naval Academy was left by my distinguished predecessor, Rear-Admiral J. L. Worden, left me little to do but to continue the routine of his administration and to follow in his steps. I feel under great obligations to him for the care he has taken to make my succession easy and agreeable.

The candidates for appointment as cadet-engineers were subjected to a careful and thorough competitive examination, and a sufficient number of those pronounced most proficient appointed in conformity with the law, notwithstanding the fact that they had not generally attained that proficiency in the studies in which they were examined, which it is desirable they should possess on admission.

This may be said of the candidates who presented themselves for admission as cadet-midshipmen, for out of one hundred and five, (105,) forty-four (44) were found by the academic board not duly qualified for admission, eight were physically disqualified for the service, and fifty-three (53) were found duly qualified and admitted into the academy.

Since the conclusion of the examinations for admission, the re-examinations, and the subsequent action of the Department thereon, there remain in the academy two hundred and forty-six (246) cadet-midshipmen and forty-six (46) cadet-engineers, making a total of two hundred and ninety-two (292) students.

I transmit herewith for the information of the Department copies of the reports of Captain K. R. Breese, U. S. N., of the cruise of the practice-ship Constellation, and of Lieut. Commander O. A. Batcheller, of the cruise of the practice-steamer Mayflower.

I also inclose a duplicate of the estimates for the academy for the fiscal year ending June 30, 1876, prepared by my predecessor, and called for by the communication of the Department, bearing date the 1st instant.

I am, sir, very respectfully, your obedient servant,

C. R. P. RODGERS,
Rear-Admiral, Superintendent.

Rear-Admiral WM. REYNOLDS, U. S. N.,
Acting Secretary of the Navy.

REPORT OF CRUISE OF THE CONSTELLATION.

UNITED STATES PRACTICE-SHIP CONSTELLATION,
Annapolis Harbor, September 26, 1874.

ADMIRAL: In obedience to the order of the superintendent, I have to submit the following report of the practice-cruise of this ship under my command:

I assumed command on the 18th day of May, with the following-named officers:

Lieut. Commander P. H. Cooper, executive officer.
Lieut. Commander P. F. Harrington, navigator.
Lieut. Commander A. G. Caldwell, senior watch-officer.
Lieut. Commander John Schouler, watch-officer.
Lieut. W. H. Brownson, watch-officer.
Lieut. Asa Walker, watch-officer.
Lieut. E. D. F. Heald, watch-officer.
Paymaster Joseph A. Smith, U. S. N.
Surgeon James H. Tinkham, U. S. N.
Chaplain John R. Matthews, U. S. N.
Assistant Surgeon W. J. Cronyn, U. S. N.
First Lieut. D. Pratt Mannix, U. S. M. C.
Acting Gunner Robert Sommers, U. S. N.
Boatswain Andrew Milne, U. S. N.
C. M. McLeod, clerk to commandant of midshipmen.
F. C. Adams, paymaster's clerk.

The ship arrived at Annapolis on the 16th May, 1874, was admirably fitted out, and having above an average crew. Under the able administration of the executive officer she made a most excellent appearance, and the few days before the embarkation of the midshipmen, which took place on the 8th of June, sufficed to place the ship in such routine order that the sudden acquisition of 127 cadet-midshipmen, with their anomalous position, did not disturb the routine, and the midshipmen fell as quietly into their places and stations as if but an every-day affair.

There were 36 cadet-midshipmen of the first class, 14 cadet-midshipmen of the second class, 66 cadet-midshipmen of the third class, 11 cadet-midshipmen of the fourth class, embarked for the cruise.

They occupied the whole of the berth-deck, being crowded themselves and crowding the ship's company, consisting of 222 people, into even narrower limits; still every person had a berth, such as it was.

The ship left the roads on the 13th of June and proceeded to Hampton Roads, arriving there the next day. Here a delay of four (4) days was caused by the repairs of the spar-deck capstan.

On the 18th of June got under way and proceeded to sea, steering a course E.SE. until across the Gulf-Stream.

The weather, though generally fine, was varied enough to get most of the cadet-midshipmen sea-sick and give them that taste of their life.

Cruising between this point and Montauk, the general routine as established was carried out.

On the 2d of July the surgeon reported that Lieutenant-Commander Cooper, the executive officer, was in a deplorable condition through enlargement of the spleen, heightened in effect by his zealous attention to his arduous duties, and recommended that he should be sent out of the ship as soon as possible. Accordingly, we ran into Gardiner's Bay, where Lieutenant-Commander Cooper left, having been condemned by medical survey. This necessitated the following changes in the ship: Lieutenant-Commander Harrington became the executive officer, and Lieutenant Walker, who had been the assistant to the navigator, became the navigator.

From this time till September 7 the ship was in and about Long Island Sound, with the exception of six (6) days spent at Newport, to witness the torpedo-practice made before the congressional committee.

On the 3d of September the ship left New London for this place, but owing to the heavy weather outside of Montauk I came through the

sound, and by way of Sandy Hook arrived at Hampton Roads September 10.

After a stay of six days at Hampton Roads, a part of the time being detained by bad weather, the ship left for a cruise in the lower Chesapeake, en route for Annapolis.

On the 19th, when off the Wolf Trap, we communicated with the Triana, and received orders from the superintendent to be at the Patuxent on the 20th, and at Annapolis Roads on the 22d, arriving there as directed.

The midshipmen of the first and second classes were taught navigation, under Lieutenant-Commander Harrington, until he became executive officer, and then under Lieutenant Walker.

The log-books, seamanship notes, &c., of the first class, were specially under Lieutenant-Commander Caldwell, and mistakes corrected under his instructions.

Those of the second and fourth classes were under Lieutenant Heald, and the third class was carefully looked after by Lieutenant-Commander Schouler, assisted by Lieutenants Brownson and Walker.

A number of the cadet-midshipmen found deficient in June and required to pass an examination on their return had Lieutenant Brownson particularly assigned to give advice and instruction.

The customary evolutions and exercises performed during the practice-cruise have taken place, and some others in addition, and the midshipmen have had opportunities to make notes upon them all.

In navigation, everything has been done to give the midshipmen of the first class a knowledge of the use of the sextant, and of the different methods of establishing the position of the ship at sea, and by cross-bearings, where possible.

A very careful system of marking for the results of the midshipmen's work has been adopted, and I have to ask, when laid before you, will receive your earnest consideration.

The value of the practice-cruise as felt by the midshipmen personally beyond the few to receive cadet appointments has amounted to nothing, and the careless and indifferent are even more so, feeling that they are not affected in their class-standing.

Those who have shown an utter want of capacity for the service, or desire to learn, have been received at the academy at the end of the cruise on the same favored footing with those who have striven to benefit themselves by the opportunities offered, and I most respectfully urge that an appreciative value be given to the cruise report, and that where a cadet is found so lamentably deficient in all the requirements of a young naval officer as not to hazard a doubt as to his future usefulness, he should be dropped more promptly than those found deficient in their studies. I can but believe that unless some such plan is adopted the effect of the practice-cruise will be unfavorable to the whole body of midshipmen.

I believe this practice-cruise has differed very little from others; and it being my first, I have been struck with what appear to me great defects. I beg leave to point them out, and to suggest what I think would remedy them.

The practice-ship has an ordinary, picked-up crew allotted to her; it may be good, indifferent, or bad; on this cruise has been exceptionably good, and with an exceptionably good set of petty officers. The crews are put on board, at most, a few weeks before the officers can take them regularly in hand, well or indifferently shaken down by the time the midshipmen come on board.

The third-class man now receives his first impressions of his profession, and the first-class man, with professional intelligence enough, as he thinks, to comprehend, takes in this ship as his standard, a newly commissioned American ship-of-war, with a crew as above alluded to, too much crowded for comfort, and more or less harassed by the extra duties imposed upon them from the character of the ship. Both classes form a part of the ship's company in all respects, save cleaning the ship. Their duties, with this exception, are identical with those of the crew. What more natural thing than for the third-class man to adopt the seaman as his standard, to derive his professional notions from him, and the first-class man to struggle against the habits acquired on his last cruise, and endeavor to fit himself as an officer; and how hard for him to do so, when, for the exception of the time on his particular detail as a midshipman of the watch, or officer of deck, he is still a foremast-hand?

With these duties, it seems to me, there must go the notions and feelings of seamen, and which, I think, would be a most admirable system as establishing the true sympathy that should exist hereafter between the officer and man, arising from a due knowledge of a seaman's duties and condition, did we but retain our men in the service. But our crews have no established character, no homogeneity, and no feelings in common with each other; they come together accidentally, have no preference for the service, and make use of it for the time being, ready to desert at a moment's temptation, and, hence, create an altogether false impression on the young midshipmen.

The midshipmen find themselves pulling beside and sandwiched in between the servants. How distasteful this is every graduate of the academy can speak; how much less distasteful when working beside the seamen only, and if among themselves, taken as a part of the instruction, cheerfully and willingly. Where this unity of duty on the part of the crew and the midshipmen exists, there must be a conformity of sentiment. The utterances of the disreputable are forced upon the ears of the midshipmen, and I feel satisfied that, though every endeavor is made to separate the midshipmen from the men, the morals of the latter affect the former, and to no small extent.

To remedy this, I would suggest that all the practical seamanship be taught at the academy, which could be done to a great advantage by having a properly equipped steam-vessel, manned by cadet midshipmen and cadet engineers, with just enough selected men to do certain duties not expected of cadets. Here they will be surrounded by no other influences than are inherent among them, and which can be reached or provided for. I claim that they can be taught better in this way, and that the knowledge so gained will be of more avail to them as officers, than in the present way, or, at least, with no bad tendencies. Here, also, the officer would derive his true sympathy with the crew from the proper knowledge of the duties and acquirements of a seaman, and acquired without the influences of a seaman of the present practice-cruises.

For the first class, I would suggest that they be sent to sea only as midshipmen, required to learn navigation and study seamanship as on the present practice-cruise. For this purpose the Constellation is admirably adapted; could be kept in commission as a cruiser with a full crew and an extra number of officers. This ship could be considered as a school for instruction of *officers*, and every officer of and below fifty (50) in the grade of lieutenant commander should be made to serve a year in her.

This ship leaving the United States in November, would return in June well ordered and disciplined, and taking on board the first-class cadet-midshipmen, it would matter little where they went, though a visit to Europe would answer better for all concerned.

The benefit to the first-class midshipmen cannot be doubted, and the service generally would profit by this ship for instruction of officers.

It seems admitted that even West Point cannot give the practical instruction to its graduates that is desirable, and artillery schools and torpedo and engineer schools are already established, and cavalry and infantry, it is thought, will come up for the practical instruction of officers.

In our own service we have already a torpedo school. Can we not have a school-ship for instruction of officers, in which the first-class cadet-midshipman can get the ideas of his future formed, and learn his practical navigation? I have only to add that all graduates of the academy with whom I have conversed on this subject, agree with me in my opinions of the practice cruise, as also for the school for officers.

In conclusion, I must state that the happiest relations existed between the officers and myself, and the untiring patience, ability, and care displayed by every officer to a marked degree, gave me the great pleasure of the cruise.

There are but few cases of misconduct that I have to bring to your notice. Generally the midshipmen have behaved most excellently and have shown a most commendable spirit, making the best of their surroundings, and cheerfully and willingly, in spite of discomforts. As a part of the ship's company, in their duties aloft and about the decks, their ability and attention to their duties have excited my admiration, and any one would be glad enough to have so able a body under his command.

This with opinions on all subjects of the cruise is carefully registered in the accompanying reports, and which I beg again to urge upon you, what seems to me, the importance of giving them a value in establishing a final standing of the midshipmen.

Very respectfully, your obedient servant,

K. R. BREESE,
Captain commanding, and Commandant of Midshipmen.

Rear-Admiral C. R. P. RODGERS, U. S. N.,
Superintendent United States Naval Academy,
Annapolis, Md.

REPORT OF THE CRUISE OF THE MAYFLOWER.

UNITED STATES PRACTICE-STEAMER MAYFLOWER,
Off Annapolis Md., September 26, 1874.

SIR: I have the honor to submit the following report of the summer's practice-cruise with the cadet-engineers embarked for instruction:

The cadet-engineers were received on board on Monday, June 8, and assigned hammocks and lockers, arranged in regular watches in engine and fire rooms, and their journals commenced.

The engineers of the vessel were detailed from the academy, and, in addition to their ordinary duties, were charged with the instruction of the cadet-engineers.

The course of instruction pursued has been, on board to teach thor-

oughly the practical duties connected with the care and management of the engine and dependencies of this vessel, such as starting and managing fires under all circumstances, filling boilers and maintaining the water at the proper level and density, the management and regulation of the engine, the uses and management of the steam-pump and its connections, taking indicative diagrams and making computations from them, cleaning, repair, and care of engine and boilers in port, keeping steam-log, making out engine and fire room station-bills, &c.; in short, everything connected with their professional duties on board ship.

On shore: To follow the iron, from its condition as ore, through all its various stages to the completed product; to study the different processes and the means by which the various changes were accomplished; to study the design and construction of engines and boilers and the manner of placing and securing them in position on board ships; to study the working of various types of engines, and to understand the relative advantages and disadvantages of each.

Particular attention has been given to compound engines and their boilers.

Each cadet-engineer has kept a journal of the cruise and a sketch-book, in which he has entered sketches and descriptions of such operations and machinery as were new or instructive.

On all occasions when the cadet-engineers have visited the shore for instructions, they have been accompanied by one of their instructors, and generally by both of them.

We sailed from Annapolis, June 12, for Washington, D. C., and arrived at the navy-yard Saturday, June 13, where we remained until the 22d.

During our stay here, the cadet-engineers visited the machine-shops, forges, founderies, &c., in the yard, and the Patent-Office in the city. In the yard everything of professional interest was explained to them, and notes and sketches made. Very little work was going on, but they had an excellent opportunity of seeing the construction of a very intricate mold for a cylinder of a compound engine, which they also saw poured.

At the Patent-Office they received every attention from the authorities in charge, and such models, &c., as they wished to examine were taken from the cases for that purpose.

We sailed from Washington on the 22d of June for New York, touching at Norfolk, Va., for men to complete our complement, and for coal.

The object in going to New York, at this time, was to enable the cadets to witness the trial of the new compound engines of the United States frigate Tennessee, which was about to take place. We arrived at the navy-yard, New York, June 26, after a very pleasant passage.

I called upon Messrs. John Roach & Co., of the Morgan Iron-Works, and Messrs. Delemater, of the Delemater works, and obtained their cordial permission for the cadet-engineers, with their instructors, to visit their works and witness such manufacturing as was then going on, as well as to make such notes and sketches as they might desire.

At the Morgan works two days were spent, one in looking through the shops where the engines of the Pacific Mail Steamship Company's steamer City of Tokio were being finished. Here they saw the forging of a large shaft and the molding of the Hirsch screw-propeller from patterns.

The second day was spent on board the City of Peking in a thorough examination of her machinery, which is of the compound type. On this visit the cadets were accompanied by Mr. Edward Farron, the designer

of the vessel, who kindly gave them full explanations of everything of interest.

At the Delemater works particular attention was paid to their method of molding screw-propellers, which differs from that in general use in that they cast the driving-face upward.

Mr. Roelker was detailed by the proprietors to accompany the party, and was kind in his attentions.

Through the courtesy of the captain of the navy-yard the steam-tug Rocket was placed at our disposal for the purpose of these visits.

In the navy-yard the various shops, forges, &c., were visited, as well as the new torpedo-boat Alarm, and the iron-clad Colossus, still on the stocks, but with most of her machinery in place. The principal object of interest was the converted compound engine for the Quinnebaug, which was erected in the machine-shops, and from which several sketches were made.

The Tennessee was also visited and her machinery carefully examined, and arrangements made for witnessing her trial; but an unfortunate accident to her engines prevented its taking place at that time.

As it was thought by the parties in charge of her that she would be ready again in a few weeks, I decided to proceed east at once and visit the places laid down in my instructions, returning to New York in time for the trial.

Accordingly we sailed for Boston July 9, passing through Long Island and Vineyard Sounds, arriving at the Boston navy-yard July 12, after a very tedious passage, having been compelled to anchor twice on account of thick fogs.

I called upon the proprietors of various manufacturing establishments in this vicinity, and with one exception obtained their cordial permission for the young gentlemen, with their instructors, to visit their works. The exception noted above was in the case of the American Seamless Tube Company, the president of which declined to grant my request, on the ground that their rule was "not to admit visitors."

The cadets visited the Bay State Iron-Works, South Boston, where they were very kindly received by Mr. Crooker, the superintendent. They saw the process of puddling iron and rolling it into boiler-plate and railroad bar; also a Siemens-Martin steel-furnace, which, however, was not in blast.

At the Norway Iron-Works, South Boston, was seen the manufacture of all kinds of bar-iron, especially that to be used in conversion to blister-steel, which process and the ovens used were carefully examined; also the manner of grading the steel for market.

At the South Boston Iron-Works the casting of large guns, by the Rodman process, as well as the manner of boring and rifling them, was fully explained by Mr. Read, the superintendent.

Two large cast-iron guns were in the lathes, one a muzzle-loader, the other a steel-lined breech-loader, the lining-tube for which was imported from Germany.

At the Marine Steam-Engine Works of Harrison Loring, the new engine building for the Seminole, formerly United States sloop of war, was seen, and afforded a good opportunity for instruction on the erection of engines in the shop before being placed on board ship. Here they also saw a new and excellent method of putting in air-pump linings.

At the American Steam-Gauge Works, Boston, the superintendent, Mr. Moor, explained the manufacture of pressure-gauges under various patents, and the method of graduating them by standard gauges, which

in turn are frequently compared with the mercury-column. Also the manufacture of the Richards steam-engine indicators.

At the Atlantic Works, East Boston, they saw two compound engines building for the new sloops, and had an excellent opportunity to inspect the detail parts.

At the East Boston Forge Company's works they saw some large forgings being made under a trip-hammer from scrap-iron.

Through the courtesy of the captain of the navy-yard, a steam-launch was placed at our disposal to visit the works in South and East Boston.

In the yard the cadets visited the various shops, &c. In the machine-shop particular attention was called to some of the machines, which are the largest of their kind in the country. The United States frigate Wabash was visited and the peculiarities of her machinery pointed out; also the sloop Vandalia on the stocks, but receiving her machinery. Advantage was taken of this to explain fully the manner of placing and securing engines and boilers in wooden vessels.

The new Coast Survey steamer Geo. S. Blake, fitted with compound engines, was also visited and examined. Copious notes and sketches were made at each of the places visited.

Having finished with most of the places of interest in Boston and vicinity, and having filled up with coal, we started July 30 for Portsmouth, N. H., where we arrived the same day.

Here the cadets visited the various shops, &c., in the navy-yard; but as very little work was going on, there was not much that was new to be seen. They, however, saw the operation of two kinds of "link-planers" which were started for their benefit.

Visited also the United States sloop Plymouth, being fitted with new boilers and a novel arrangement of superheaters, and the tug-boat Speedwell, fitted with new high-pressure boilers.

We sailed from Portsmouth, N. H., August 3, for Providence, R. I., where we arrived and anchored on the evening of the 4th, after a very pleasant passage, and having stopped off Cape Ann to fish.

Here the Corliss Steam-Engine Works, the Hope Station water-works, and the American Gimlet-pointed Screw Company's works, were visited.

At the Corliss works the party was very kindly received by Mr. George Corliss, who called their attention to a novel arrangement of pumps for city water-works, which was then in operation, the details of which he carefully explained, after which he showed the party through his very extensive shops, where much was seen that was both interesting and instructive.

At the Hope Station water-works were seen the pumping-engines erected by the Corliss company, which have caused so much controversy among hydraulic engineers.

At the screw-works the very interesting process of making screws was seen, as well as the large engine which drives the works.

We sailed from Providence August 9, and, with boilers leaking badly, proceeded through Long Island Sound to New York, where we arrived on the 11th, having been compelled to anchor twice on account of thick weather. Here we remained until the 18th repairing boilers, the cadets meantime visiting such places of interest as they had not seen during our former stay.

Having previously obtained permission, they visited the Quintard Iron-Works, the hydraulic-works of H. R. Worthington, the Chrome Steel-Works, and the White Star steamer Britannic, the tug-boat Rocket being again placed at our disposal.

At the Quintard works they saw another compound engine for a new sloop, a large inverted cylinder-engine for the steamer Alexander, and the boilers for this vessel, which are of a novel design.

The party was indebted to Mr. Quintard, one of the proprietors, for his kind attentions.

At the Chrome Steel-Works the entire process of manufacturing steel by their method was explained by Mr. Hoyhian, the superintendent, after which a number of very interesting experiments were made exhibiting the good qualities of the steel.

At the hydraulic-works of H. R. Worthington & Company were seen all the different kinds of pumps manufactured under their patents.

On board the White Star steamer Britannic they examined her machinery, and particularly the peculiar arrangement for changing the immersion of her screw.

Having completed the repairs to the boilers and filled up with coal, we started August 18th for Cold Spring, N. Y., where we arrived the same day. Here the cadets visited the Cold Spring Foundery, where they saw a large Cornish pumping-engine, the beam alone of which weighed sixty tons, also a novel engine for a street-car, besides the foundery, in which, however, there was but little work going on.

Mr. Paulding, of the firm, kindly accompanied the party through the works.

The only other place of interest here, the Brock Smelting-Furnace, being out of blast, we proceeded to Newburgh, N. Y.

Here the Wright Steam-Engine Works were visited, where various engines fitted with the "Wright cut-off" were seen, as well as a compound engine for a new sloop. The party was accompanied by Mr. Stratton, of the firm, who also took them to the Newburgh Cotton-Factory to see a compound beam-engine recently erected by Wright & Co., and which was said to be working with extreme economy.

On the 21st of August we dropped down to West Point to permit the cadet-engineers to visit the Military Academy.

At daylight of the 22d started down the river bound for Wilmington, Del., where we arrived on the 24th, after a very pleasant passage, and having anchored the previous night off the mouth of Christiana Creek.

I called upon the proprietors of various manufactories in Wilmington, who granted cordial permission for the visit of the cadet-engineers.

At the machine-tool works of Hilles & Jones the party was kindly received by Mr. Jones and shown through the works, and their attention called to several machine-tools peculiar to this firm; also to a very complete set of Whiteworth gauges.

At the rolling-mill of Slidell & Hastings, the manufacture of boiler-plate was seen, also a method of working up, in an open-hearth charcoal-fire, cast and wrought iron borings and other scraps, too small to pile.

At the iron-ship-building yard of the Harlan & Hollingsworth Company their very complete system of iron-ship construction, from the mold-loft to the launching-ways, was fully explained by Captain Benson, one of the firm and the free use of the drawing-room and drawings accorded. Here was seen one of the new iron sloops, nearly ready for launching, also a steamer in process of framing, which furnished good opportunities for studying the details of construction. The proprietors left nothing undone to make this visit one of the most interesting and instructive of the cruise.

At the works of Pusey, Jones & Co. the party was very kindly re-

ceived by Mr. Savery, one of the firm, and shown through the works by the superintendent. Very little work was going on, but they saw a steam-boiler slung and hoisted on board, also the "Trempus cut-off,' which this firm apply to many of their engines, and a novel portable steam-riveter, the peculiarity of which is that it is moved to the work instead of the work being brought to it.

At the machine-works of J. Morton Poole & Co., the party was taken in charge by Mr. Porter, the superintendent, and shown through the works. He explained their method of grinding and polishing chilled cast-iron rolls for paper-manufacture, by which the great accuracy necessary is obtained. He also pointed out several very ingenious mechanical devices peculiar to these works.

At the Lobdell Car-Wheel Works the process of making chilled cast-iron car-wheels and the manner of forcing them on to axles were seen.

At the Jackson & Sharp Company's car-works, Mr. Auchencloss, the vice-president, explained the manufacture of railroad-cars; also exhibited several very ingenious wood-working machines, and the "Allen" engine which drives the works, from which a number of indicator diagrams were taken, showing the regularity of speed of this engine with widely varying loads. From Mr. Job Jackson, president of the company, we received much kind attention, as well as the free use of their wharf.

Having finished at Wilmington, we sailed for Chester, Pa., on the 29th of August, arriving the same day. Here the fullest permission was given by Messrs. John Roach & Co. for the examination of their works. The two iron sloops on the ways, and nearly completed, afforded a good opportunity for studying the manner of construction and the quality of work at this yard, and of comparing it with similar work at Wilmington. One of these vessels was launched during our visit, and advantage was taken of it to point out to the cadets the manner of constructing the ways and cradle, as well as the precaution observed in launching. In the machine-shop the engines of these vessels, as well as the one at Wilmington, were being erected. Free access to all drawings was given, and many useful sketches made.

We remained at Chester until September 2, when we proceeded to the navy-yard, Philadelphia. Here the various shops, &c., in the yard, and the establishments of J. P. Morris & Co., William Sellers & Co., Robbins & Co., Neafie & Levy, Bement & Sons, and the Baldwin Locomotive-Works, were visited, permission having previously been obtained.

At the yard, the shops, &c., were visited, but there was little else than boiler-work going on. The attention of the cadets was called to the great care exercised in fitting up this work, all the holes being drilled, and the plates machine-fitted.

The monitor Wyandotte was visited, and the details of the machinery explained. Also the new Quinnebaugh on the stocks, where a method of boring the dead-wood was explained, differing in some points from that already explained to the cadets in the case of the Vandalia.

At the works of J. P. Morris & Co. were seen a Leavitt pumping-engine, a Shaw gunpowder pile-driver, and an Ericsson air-engine, the operation of all of which was explained to the cadets.

Through the courtesy of the captain of the navy-yard, a tug-boat was placed at our disposal for this visit.

At William Sellers & Co.'s were seen the numerous machine-tools manufactured by them; also their Giffard injectors. The very systematic method of carrying on their works was particularly explained by Mr. Brooks, one of the firm.

At Robbins & Co.'s iron-smelting furnace the entire process of con-

verting iron-ore into pig-iron was seen and studied, together with all the modern improvements with which the furnace is fitted. Mr. Robbins kindly accompanied the party and gave full explanations.

At Neafie & Levy's foundery and machine-shops the works were examined, and particular attention was given to their method of molding screw-propellers.

At Bement & Son's Industrial Works was seen, besides the general run of machine-tools made by this firm, a new arrangement of feed-table for a punching-machine, by which the holes can be spaced off to the smallest fraction of an inch.

At the Baldwin Locomotive-Works were seen locomotives in all stages of manufacture, and especial attention was called to a method of calking boilers recently patented by this firm. Mr. Crawford accompanied the party through the works and gave desired explanations.

Having finished with the various places of interest at Philadelphia, and having filled up with coal, we started on the 15th of September for Hampton Roads, Virginia, on our return to Annapolis.

I take pleasure in calling your attention to the uniform courtesy with which the cadets have been received wherever they have visited.

During the entire cruise they have kept regular watches in the engine and fire rooms, their stations being changed by rotation, so as to familiarize each with all the duties.

I am indebted to the officers of the vessel for the zealous interest they have shown in the performance of their duties, and particularly to Passed Assistant Engineers Tower and Manning, the instructors, who have given their entire time and attention to their very onerous duties.

I feel it my duty to represent to you how unsuitable this vessel is for the purpose of the cruise.

Her engine is of a type not to be found in men-of-war, and affords but poor opportunities for imparting a practical knowledge of the more modern machinery now in general use; while her quarters for men and officers are quite insufficient.

The young gentlemen receive their first and most lasting impressions of the naval service on the practice-cruise; and, in order that these should be correct, it is necessary that the routine and etiquette of a man-of-war, as well as the strictest discipline, should be observed. In a vessel of this class, naval etiquette and routine must, of necessity, be set aside to a great extent, and the number of line-officers of suitable rank that can be accommodated on board is scarcely sufficient to maintain strict discipline.

We returned to Annapolis on the 22d September, and the cadet-engineers were landed on the 25th of September.

I am, sir, very respectfully, your obedient servant,

O. A. BATCHELLER,
Lieutenant-Commander, Commanding.

Rear-Admiral C. R. P. RODGERS, U. S. N.,
Superintendent Naval Academy.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Naval Academy.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
NAVAL ACADEMY.		
Pay Naval Academy:		
One professor of drawing, (head of department)	$2,500 00	
One professor of English studies, history, and law, (head of department)	2,500 00	
Three professors, viz: One of mathematics, one of chemistry, and one of French, (assistants,) at $2,200 each	6,600 00	
Twelve assistant professors, viz: Four of French, one of Spanish, three of English studies, history, and law, one of mathematics, one of astronomy, and two of drawing, at $1,800 each, (appropriated, 17 Stat. at L., p. 153)	21,600 00	
Sword-master, at $1,500, and two assistants, at $1,000 each, (appropriated, 17 Stat. at L., p. 153)	3,500 00	
Boxing-master and gymnast, at $1,200, and assistant librarian, at $1,400, (appropriated, 17 Stat. at L., p. 153)	2,600 00	
Three clerks to superintendent, at $1,200, $1,000, and $800 each, (appropriated, 17 Stat. at L., p. 153)	3,000 00	
One clerk to commandant of midshipmen, (appropriated, 17 Stat. at L., p. 153)	1,000 00	
One clerk to paymaster, (appropriated, 17 Stat. at L., p. 153)	1,000 00	
One apothecary, (appropriated, 17 Stat. at L., p. 153)	750 00	
One commissary, at $288, one cook, at $325.50, and messenger to superintendent, at $600, (appropriated, 17 Stat. at L., p. 153)	1,213 50	
One armorer, at $529.50, gunner's mate, at $469.50, and quarter-gunner, at $409.50, (appropriated, 17 Stat. at L., p. 153)	1,408 50	
One cockswain, at $469.50, and three seamen in department of seamanship, at $349.50 each, (appropriated, 17 Stat. at L., p. 153)	1,518 00	
One band-master, at $528, and eighteen first-class musicians, at $348 each, (appropriated, 17 Stat. at L., p. 153)	6,792 00	
Seven second-class musicians, at $300 each, two drummers and one fifer, first-class, at $348 each, (appropriated, 17 Stat. at L., p. 153)	3,144 00	
	59,126 00	$58,826 00
Estimate of appropriations required under head of pay of professors and others for the fiscal year ending June 30, 1876	59,126 00	
Amount appropriated under head of professors and others for the fiscal year ending June 30, 1875	58,826 00	
Excess	300 00	
NOTE.—This excess is occasioned by an increase of pay recommended for the professor of English studies, history, and law, who has recently been placed at the head of that department, with increased responsibilities, making his pay per annum the same as that received by the professor at the head of the department of drawing.		
Pay of watchmen and others:		
Captain of the watch, at $2.50 per diem	912 50	
Four watchmen, at $2.25 per diem each	3,285 00	
Foreman of the gas and steam-heating works, at $5 per diem	1,825 00	
Ten attendants at gas and steam-heating works of academy and schoolships, one at $3.50, one at $3, and eight at $2.50 per diem each	9,672 00	
Three joiners, two painters, and two masons, at $3.50 per diem each	8,942 50	
One tinner, one gas-fitter, and one blacksmith, at $3.50 per diem each	3,832 50	
	28,469 50	30,659 50
Decrease	2,190 00	
NOTE.—Decrease occasioned by a reduction of two attendants at the gas and steam-heating works, at $3 per diem each.		
Pay of mechanics and others:		
One mechanic at workshop, at $2.25 per diem	821 25	
One master-laborer, to keep public grounds in order, at $2.28 per diem	832 20	
Fourteen laborers to assist in same, three at $2 and eleven at $1.75 per diem each	9,216 25	
One laborer to superintend quarters of cadet-midshipmen, public grounds, &c., at $2.28 per diem	832 20	
Four attendants at recitation-rooms, library, chapel, and offices, at $20 per month each	960 00	
Twenty servants to keep in order and attend to quarters of cadet-midshipmen, public buildings, &c., at $20 per month each	4,800 00	
	17,461 90	17,461 90

Estimates of appropriations required by the Naval Academy, &c.—Continued.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
Pay in department of steam-enginery:		
One machinist, at $3.50 per diem	$1,277 50	
One machinist, at $3 per diem	1,095 00	
One blacksmith, at $3.50 per diem	1,277 50	
One boiler-maker, at $3.50 per diem	1,277 50	
One pattern-maker, $3.50 per diem	1,277 50	
One molder, at $3.50 per diem	1,277 50	
Two laborers, at $1.75 per diem	1,277 50	
	8,760 00	$8,760 00
For the necessary repairs of public buildings, pavements, wharves, and walls inclosing the grounds of the academy; for improvements of the same, and for furniture, fixtures, &c	14,000 00	14,000 00
For heating and lighting:		
For fuel for heating and lighting the academy and school-ships	15,000 00	15,000 00
NOTE.—This estimate for fuel has heretofore been included under the head of contingent expenses, but as the amount is indispensably necessary for the proper heating and lighting of the academy, &c., a separation of it from the items of contingent expenses is deemed desirable, and is therefore made.		
Contingent expenses, Naval Academy:		
For the purchase of books for the library	2,000 00	
For stationery, blank-books, models, maps, &c., and for text-books for use of instructors	2,000 00	
For the expenses of the Board of Visitors	2,600 00	
For printing and binding	2,000 00	
For postage on public service	750 00	
For the purchase and repair of instruments, and for the purchase of chemicals in the department of physics and chemistry	2,000 00	
For the purchase of gas and steam machinery, steam-pipe and fixtures, rent of buildings for use of the academy, freight, cartage, water, music, musical and astronomical instruments, uniforms for bandsmen, telegraphing, and for the current expenses and repairs of all kinds, and for incidental labor and expenses not applicable to any other appropriation	33,450 00	
For stores in the department of steam-enginery	800 00	
For materials for repairs in steam-machinery	1,000 00	
	46,600 00	46,600 00
NOTE.—(See recapitulation.)—The excess in the amount asked for the fiscal year ending June 30, 1876, over the amount appropriated for the fiscal year ending June 30, 1875, is occasioned by the reduction made by Congress of $17,750 in the estimate submitted under this head and the appropriation made for the year ending June 30, 1875.		
RECAPITULATION.		
Pay of professors and others	59,126 00	58,826 00
Pay of watchmen and others	28,469 50	30,659 00
Pay of mechanics and others	17,461 90	17,461 90
Pay in department of steam-enginery	8,760 00	8,760 00
Repairs and improvements	14,000 00	14,000 00
Heating and lighting	15,000 00	.....
Contingent expenses	46,600 00	46,600 00
	189,417 40	176,306 90
Excess	13,110 50	

Respectfully submitted.

JOHN L. WORDEN,
Rear-Admiral and Superintendent Naval Academy.

UNITED STATES NAVAL ACADEMY,
Annapolis, Md., September 1, 1874.

No. 3.

BUREAU OF EQUIPMENT AND RECRUITING.

NAVY DEPARTMENT,
BUREAU OF EQUIPMENT AND RECRUITING,
Washington, October 27, 1874.

SIR: I have the honor to submit herewith the annual operations of this Bureau, together with the estimates for the fiscal year ending 30th June, 1876.

During the past fiscal year one hundred and three vessels have been either partially or wholly equipped under this Bureau at the several navy-yards, at an expenditure of labor and of material, part of which was on hand and part purchased, of $1,559,549.67.

Fifty-nine thousand six hundred and sixty-five tons of coal have been purchased, costing, including freight, labor, &c., $624,512.

Two hundred tons of hemp have been purchased, costing $63,647.97, and four hundred and ninety-nine tons of hemp have been manufactured into rope.

The rope-walk at the Charlestown navy-yard has supplied the wants of the service with wire, hemp, and manila rope.

The equipment-shops at the Washington navy-yard have supplied all the wants of the service for anchors, chains, galleys, &c.

The naval rendezvous were closed on the 3d January last, except at Mare Island, and were only opened again for the enlistment of a crew for the Plymouth, and to fill vacancies in the North Atlantic and Pacific squadrons. They are closed at present.

The former recommendations of the Bureau, as to furnishing enlisted men with an outfit on entering the service, and as to apprehending deserters after the time of their enlistment has expired, and causing them to serve out their lost time, as is the case in the Army, are respectfully renewed.

The Bureau has placed its estimates for 1875–'76 at the amounts heretofore appropriated for the last five years, as it is evident that the reduction made in the appropriations for the current year, if continued, will leave the Bureau with insufficient funds to carry on its operations.

I have the honor to be, very respectfully, your obedient servant,

WM. REYNOLDS,
Chief of Bureau.

HON. GEO. M. ROBESON,
Secretary of the Navy.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Bureau of Equipment and Recruiting.

Detailed objects of expenditure and explanations.		Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
SALARIES.			
Chief clerk, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3)		$1,800 00	.....
One clerk of class four, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8)		1,600 00	.....
One clerk of class three, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8)		1,600 00	.....
Two clerks of class two, per act of July 12, 1870, (16 Stat. at L., p. 248, sec. 1)		2,800 00	.....
Two clerks of class one, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8)		2,400 00	.....
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3)		840 00	.....
One laborer, per act of July 12, 1870, (16 Stat. at L., p. 250, sec. 3)		720 00	.....
		11,960 00	$11,960 00
CONTINGENT EXPENSES.			
Stationery, books, and miscellaneous items, per act of June 20, 1874		850 00	850 00
PAY OF THE NAVY.			
For pay of commissioned and warrant officers at sea, on shore, on special service, and of those on the retired list and unemployed, and for the pay of the petty officers, seamen, ordinary seamen, landsmen, and boys, including men of the Engineer's force, and for the Coast-Survey service, 8,500 men, at an average pay of $300 per annum, per act of July 15, 1870, (16 Stat. at L., p. 330, secs. 3–17)		6,500,000 00	6,250,000 00
TRAVELING EXPENSES OF OFFICERS.			
For the actual expenses of officers traveling under orders, per act of June 16, 1874, proviso relating to traveling expenses		300,000 00	.....
EQUIPMENT OF VESSELS.			
Coal for steamers' and ships' use, including expenses of transportation, storage, and labor, hemp, wire, hides, and other materials for the manufacture of rope, cordage, canvas, leather and wood, iron for the manufacture of cables, anchors, and galleys, furniture, hose, bake-ovens, cooking and heating stoves, life-rafts for monitors, tools, condensing and boat detaching apparatuses, heating apparatus for receiving-ships, and for the payment of labor in equipping vessels, and manufacture of articles in the several navy-yards		1,500,000 00	1,065,000 00
CONTINGENT.			
Expenses of recruiting, freight, and transportation of stores, transportation of enlisted men, printing, advertising, telegraphing, books and models, stationery, express charges, internal alterations, fixtures and appliances in equipment buildings at navy-yards, foreign postage, ferriage and car-tickets, ice, apprehension of deserters, assistance to vessels in distress, and good-conduct badges for enlisted men		125,000 00	75,000 00
CIVIL ESTABLISHMENT AT NAVY-YARDS.			
At the navy-yard, Kittery, Me.:			
Chief and time clerk	$1,250 00		
Store-clerk	1,100 00		
		2,350 00	.....
At the navy-yard, Charlestown, Mass.:			
Chief and time clerk	1,400 00		
Store-clerk	1,250 00		
Superintendent of rope-walk	1,900 00		
		4,550 00	.....
At the navy-yard, New York, N. Y.:			
Chief and time clerk	1,400 00		
Store-clerk	1,200 00		
		2,600 00	.....
At the navy-yard, Philadelphia, Pa.:			
Chief and time clerk	1,400 00		
Store-clerk	1,250 00		
		2,650 00	.....

Estimates of appropriations required for the service of the fiscal year, &c.—Continued.

Detailed objects of expenditure and explanations.		Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
At the navy-yard, Washington, D. C.:			
Chief and time clerk	$1,250 00		
Store-clerk	1,100 00		
		$2,350 00	.....
At the navy-yard, Norfolk, Va.:			
Chief and time clerk	1,250 00		
Store-clerk	1,100 00		
		2,350 00	.....
At the navy-yard, Pensacola, Fla.:			
Chief and time clerk		1,000 00	.....
At the navy-yard, Mare Island, Cal.:			
Chief and time clerk		1,839 00	$19,689 00
PUBLIC PRINTING.			
For printing and binding		.....	6,000 00

BUREAU OF EQUIPMENT AND RECRUITING,
September 1, 1874.

WILLIAM REYNOLDS,
Chief of Bureau.

No. 4.

BUREAU OF NAVIGATION.

NAVY DEPARTMENT, BUREAU OF NAVIGATION,
October 25, 1874.

SIR: I have the honor to submit the following report of the Bureau of Navigation for the past year, together with estimates for its support, and for the expenditures that will probably be required in that division of the naval service committed to its immediate charge, for the fiscal year ending June 30, 1876. Included in this report, and transmitted herewith, are the reports and estimates of the several offices under its cognizance.

NAVIGATION.

It will be seen in the report of the superintendent of compasses that the recent improvements in the navy liquid compass, tested and stimulated by the system of compass inspection inaugurated during the past year, promise to leave little to be desired as to the future usefulness of this important instrument. The Bureau is so well satisfied of the superiority of these compasses, in accuracy and usefulness, over every form of dry compass, that the proper steps have already been taken to dispose of the stock of dry compasses formerly in use, retaining a few only at each naval station to meet any special emergency that may arise, like that of a deficient supply of the liquid compasses at a particular juncture.

Improved metallic binnacles are being substituted for those now in use.

The compass-stations in the vicinity of several of our navy-yards, employed for some time past in forming deviation-tables, by "swinging ship" before proceeding to sea, are believed to be of comparatively

little practical utility; partly from too close proximity in general of the objects available for the method of long distance observations, and partly from their inconvenient use in some cases with any considerable sea.

More recent experience has demonstrated that the necessary observations for tables of compass deviations may be more conveniently as well as more accurately made in the immediate vicinity of the ordinary mooring-places of our ships of war by the methods of reciprocal bearings and celestial azimuths, and even after getting to sea with greater general accuracy and less labor by the latter method. It is deemed inexpedient to keep up these stations, mostly at considerable expense, with the exception of those in Hampton Roads and near Mare Island. That in the Delaware River has long since been abandoned, on account of the very serious difficulty in maintaining the buoys against the running ice of the winter. At the other stations it is proposed to retain only the center buoy for any special occasion that it may be found expedient to resort to them. Practical instructions for this class of observations, prepared by Professor Greene, and now in press, will soon be issued, giving full details in relation to the different methods that may be advantageously employed; and the general consideration of this subject, including that of the magnetism of ships, it is expected will soon follow.

HYDROGRAPHY.

Your attention is invited to the report of the hydrographer and a favorable consideration of the estimates submitted for hydrographic work. The charts already published or in progress, the data collated, and the partial surveys and examinations of danger, suggested in general by the hydrographer, are of great utility to our commerce and to that of other nations.

It is almost superfluous to say that expenditures considerable in amount are necessary to begin extensive surveys, and that continued appropriations are required to keep them in progress. The want of them has made it necessary for the Department to turn over the Portsmouth to strictly naval duty. It is respectfully suggested that the purchase and outfit of two schooners, to act in concert with the Narragansett, will do much to increase results in the continued survey of the North Pacific Ocean. The advantage of several vessels co-operating on a running or ordinary survey, is well known and appreciated by all surveyors, affording as they do points for making observations upon, and making the aggregate results far greater than can be obtained by the vessels acting singly.

The Fortune, already fitted for the work, is ready to leave to make partial surveys in the West Indies, and during the past year has completed a running-survey of the eastern coast of Mexico from Yucatan to the Coatzacoalcos, and off-shore soundings to the mouth of the Rio Grande, our boundary-line.

The Wasp has been usefully employed surveying in the mouth of the Rio de la Plata, and other naval vessels have performed similar service in various parts of the world.

The proceeds from sales of charts and sailing-directions published by the Hydrographic Office, revert to the Treasury under the law, making to some extent the appropriations asked for rather nominal than real. The more they supply the public want, the less they will cost the country, although apparently the reverse.

The deep-sea soundings of the Tuscarora, as directed to be made by the Department, are now completed. Acting under instructions, this

Bureau made the necessary provisions for sounding with steel wire, and in the event of failing with it, for sounding with hemp-line. Aided by the advice and assistance of Sir Wm. Thomson, of Glasgow, a fair commencement with wire was obtained. The attention and ability of Commander Belknap made the work entirely successful, through such modifications of the appliances as were found to be necessary. These modifications are detailed in his reports.

The advantages of steel wire over hemp-line in deep-sea soundings are as follows: The small amount of weight and space required for the apparatus; the large relative weight of the sinker, as compared with the line employed; the very little surface-friction of wire in its descent, as compared with hemp-line; the fact that miles of wire have very little "stretch" on ordinary tension, and hemp-line a great deal, making the indications of a dynamometer comparatively uncertain with hemp-line; as consequences, the relative rapidity of descent and recovery of the wire with small labor; the ease with which wire is preserved from deterioration, as compared with hemp-line, and its small cost, combined with the unerring certainty of result.

These advantages enable a vessel-of-war to carry a sounding-apparatus without interfering in any degree with her other purposes, and to sound at such times as may be desired, or as required by instructions.

This Bureau has now nine sets of apparatus available, which will be employed as the Department may direct.

The results of the recent soundings in the Pacific Ocean are very gratifying. They have demonstrated that, with an apparatus having a dynamometer to indicate the moment of striking bottom; with steel-wire, and properly constructed specimen, and sinker-detaching appliances, the problem of measuring the exact depths of the great oceans, and bringing up parts of the soil from their beds, may now be regarded as solved.

All bottom-specimens collected during the sounding-cruise of the Tuscarora have been turned over to the Smithsonian Institution for microscopic examination.

The interoceanic surveys of the Isthmus of Darien, and south up the Atrato to the Napipi and Doguado Rivers, and in Nicaragua, have been satisfactorily carried out. As you were pleased to assign them in part for instructions to this Bureau, it becomes its duty to report its high appreciation of the difficulties attending the surveys, especially of the Napipi route, and the satisfactory manner in which all engaged performed their duties. The able reports require only to be read to settle the great question of the feasibility of the construction of an interoceanic ship-canal, regarded wholly in a commercial point of view.

NAVAL OBSERVATORY.

The report of the Superintendent of the Naval Observatory gives the work in progress, and especially the preparations made to secure extended observations of the transit of Venus. It is believed that they have been ample, and that, with favorable weather for observations, the results will be entirely satisfactory.

The great equatorial telescope is now completed, and proves to be all that could be expected.

I commend to your favorable consideration the estimates for the next fiscal year, submitted by the superintendent.

NAUTICAL ALMANAC.

The Superintendent of the Nautical Almanac presents in detail the work completed and in progress under his charge, with the usual esti-

mates for its continuance, to whose report I respectfully invite your attention.

Like those of the Naval Observatory, the publications of this Office are supplied to other Departments of the Government, and to the higher institutions of learning throughout the country, without charge, while supplying to the commercial marine, as well as to the Navy, what would otherwise be required to be procured by purchase at considerable cost from the agents of foreign governments.

The proceeds of sales of the Nautical Almanac revert to the Treasury; the appropriations made annually for its preparation and publication are therefore in part nominal, but necessary to the continued publication of the work in advance, without which it fails in its object.

NAVY-SIGNALS.

It is respectfully recommended that cadet-midshipmen be required, as a primary condition in passing a final examination, to be properly versed in signaling by the Army-signal method. This Bureau has to regret the frequent neglect on board of our vessels-of-war of this important instruction. If not insisted upon as of marked importance, it will die out through neglect.

A tactical signal-book, based upon the tactics of Commodore Foxhall A. Parker, of our Navy, is now issued. It has the advantage of being masked effectively, and in a very simple manner, when required; but it is not thought advisable during peace to inform commanding officers of the manner of execution.

The publication of an American edition of the International Signal Code by this Bureau, has done much toward bringing it into general use, and doubtless with great prospective value to ourselves and to the merchant-marine of other powers.

The chronosemic method of signaling has been experimented upon, but it is believed has not fully developed its usefulness from defect of the appliances.

The electric light bids fair to be of sufficient use to demand its trial; to that end one has been obtained, and, if found advisable, electric lights will be supplied to our vessels-of-war, as the appropriations will warrant.

The side-lights of steamers and sailing-vessels, in common with those of vessels of other nations, are defective; they throw out the rays of light at right angles to the axis of elevation of the lantern, and the axis is not maintained in a perpendicular position which is necessary to throw the rays of light horizontally, without which a plate of glass is supposed preferable to the serrated surfaces, so formed to refract the rays of light at right angles to the axis of elevation of the lantern.

An investigation of this subject is now in progress.

Respectfully submitted.

DAN'L AMMEN,
Chief of Bureau.

Hon. GEO. M. ROBESON,
Secretary of the Navy.

OFFICE OF THE SUPERINTENDENT OF COMPASSES,
BUREAU OF NAVIGATION, NAVY DEPARTMENT,
Washington, October 31, 1874.

SIR: In conformity to your general instructions of March 28, 1873, I have the honor to submit the following statement of matters pertaining to the line of duty assigned to me.

THE NAVY COMPASS.

Besides the several improvements in the Navy compass referred to in my report of the preceding year, the compass-card has been further improved by a provision for the mechanical adjustment of the cap, by which means the center of suspension is more readily brought into close coincidence with the center of the card-circle, while it more easily admits of subsequent readjustment whenever required. With the gain in precision afforded by the foregoing provision it has been made apparent that it might be advisable to make some change in the forms of the cap and pivot, in order to secure a better definition of their point of contact.

It has been deemed advantageous to insure increased rigidity in the bowl-circle, in view of its fundamental relations to the construction and adjustments of the card and pivot, and of its subsequent use as the seat of the interchangeable azimuth-circle. To this end, not only has the rim itself been strengthened, but the bowl has been made heavier and more unyielding by casting it in bronze instead of swaging it as heretofore from a rolled sheet. In addition, a further improvement of the bowl has been accomplished in the better formation of the *lubber-line*. This, as formerly painted upon the surface of the bowl, was liable to certain imperfections in direction and equality of width, besides being unnecessarily wide in some cases. It is now formed upon a white enameled plate, which is carefully set in a groove upon the surface of the bowl.

An inspection of all the liquid-compasses in the navigation-stores at the several navy-yards upon the Atlantic coast was made during the spring, the results of which were reported to the Bureau. The greater proportion of the compasses in store consisted of the earlier forms of construction, which, besides being obsolete, were in some cases in bad condition from previous service. Under the authority of the Bureau all these compasses are being put in serviceable condition, while all the 7½-inch compasses, or those of regulation size, are being completely overhauled and fitted with new cards and bowl-circles, so as to be in all respects as good as those recently furnished by the makers.

INSPECTION OF COMPASSES.

The practical utility of the compass-observatory, whose establishment was referred to in a preceding report, would appear to have been fully justified by the results of compass-inspection during the past year. Not only have we been able to arrive at a definite understanding of the actual condition of our compasses, as received from the makers, by ascertaining their fitness and detecting inadmissible defects, but it has proved a valuable school of practice in teaching the makers as well as the inspector where to look for defects in construction and adjustment, and the possibilities of improvement. It is, perhaps, too soon to pronounce an opinion as to the limits of admissible error in the adjustments of the Navy compass, but we are warranted, I think, from the results already obtained, in the opinion that the Navy regulation-compass may be supplied to the service in a condition that shall be practically perfect, so far as sensibility and the errors of adjustment are concerned. Its sensibility is now practically perfect; and this important condition of the compass is so evident a consequence of its peculiar construction, that a defect in this particular in any individual compass must be regarded as abnormal, and its cause to be looked for in some special imperfection

of workmanship in the cap or pivot. Nor is this all; but the peculiarities of construction, upon which this compass depends for its sensibility, when supplied by the makers, are alike favorable to its continuance during a long period of service under ordinary circumstances of experience at sea. Since the first inspection at the observatory, in December last, there has been a distinctly recognizable progress in improvement of the compass-adjustments; and I beg to record in this place my cordial appreciation of the maker's hearty co-operation in carrying forward every practicable improvement, alike whether suggested by me or originating with themselves, and even when involving a pecuniary outlay which could have no apparent or immediate return.

MAGNETISM OF SHIPS.

On the 25th and 26th of June last, I made a series of observations at the Boston navy-yard, on board the United States steamer Intrepid, the new torpedo-ship, then fitting for her first trial-trip. This vessel, after being launched and hauled into dock, had remained with her head not sensibly different from what it had been while she was on the stocks, up to the time of these observations, with the exception of a few days, during which period she had been moored alongside the quay with her head about eight points to the eastward of her original or general heading.

The ship has an iron hull, frames, deck-beams, deck, and bulk-heads.

Four stations on board, all in the fore-and-aft section, were selected for observation, comprising one on the poop-deck; one amidships on the deck; one in the pilot-house, a few feet forward of the smoke-funnel, and one forward of the pilot-house, on the deck.

The results of these observations revealed large differences in the deviations of the several compasses, especially of those at the aft and fore stations. Thus, while the maximum deviations at the former hardly exceeded eight degrees, or three-fourths of a point, they were not less than about seven points at the latter station. Even in the pilot-house, the maximum deviations were about four points. The directive force, as was to be expected, varied but little upon the different headings at the aft station; but its changes at the fore station were not less extreme than those of the deviations at this station. It was impracticable to observe for the directive force at the station in the pilot-house.

The pilot-house of the Intrepid is built upon the main deck, a little forward of the smoke-funnel, its lower half consisting of a massive vertical cylinder of iron, while its upper part, including its conical roof, is built of wood. The wheel is placed in the center, a little below the top edge of the iron portion of this structure, and the steering-compass was intended to be placed in its fore segment. I made no examination of the magnetic conditions of this position for the steering-compass, as it was sufficiently probable, not only that the deviations would be large, but that the directive force would be so greatly reduced on every course as to render a compass, however good in itself, practically useless. Accordingly, for the purposes of these observations, I had suspended a hanging or tell-tale-compass under the roof, as high above and as nearly symmetrical with the iron base as was practicable for convenient observation from the helmsman's place at the wheel.

The following conclusions were deduced from the observations on the Intrepid:

First. That the poop furnished a good position for the standard compass of this ship; the deviations being sufficiently moderate to cause no inconvenience in reading or correcting the compass.

Secondly. That the steering-compass, in order to be placed in the pilot-house at all, should be suspended over the wheel, in the form of a hanging or tell-tale compass, instead of being set up in a binnacle, as originally intended, forward of the wheel.

Thirdly. As it would be inexpedient at present to reduce the deviations and equalize the directive force by magnetic adjustments at the steering-compass, in view of the considerable changes which are likely to occur in the magnetism of this ship during her first experience at sea, it will be necessary and sufficient to steer her on any course set by the standard compass, by simply directing the helmsman to keep her upon the corresponding course, by comparison, of the steering-compass.

On the 21st and 22d of this month I visited the ship-yards at Wilmington, Del., and Chester, Pa., for the purpose of making preliminary observations with reference to the magnetic characteristics of the three iron sloops-of-war now being built at those places for the Government.

The ship at Wilmington was still on the stocks; while the two at Chester had been launched, but hauled alongside docks, in one case exactly, and in the other case only five degrees different from the position which it had on the stocks. The hulls and decks were complete, but no machinery, boilers, or smoke-funnel had been placed in either of the ships.*

I determined the true heading, as well as that by compass, of each ship; made observations for deviation aft and forward in each case; as also observations for horizontal or directive force, and for vertical force at the same stations on board each ship. With these data we shall be able to determine, not only approximately the present magnetic characteristics of these ships, but to appreciate the changes introduced by setting up the machinery, boilers, funnels, and other iron-work upon the decks, with the aid of subsequent observations, after the vessels are completed.

I am, sir, very respectfully, your obedient servant,

B. F. GREENE,

Prof. Math., U. S. Navy, Superintendent of Compasses.

Commodore DANIEL AMMEN, U. S. N.,

Chief of Bureau of Navigation, Navy Department.

HYDROGRAPHIC OFFICE,

Washington, August 4, 1874.

SIR: I have the honor to submit, as directed by the Bureau, the estimates of this Office for the fiscal year ending June 30, 1876.

During the past fiscal year the work which has been accomplished by this Office is as follows:

Ten charts have been prepared and engraved; seven are in process of engraving; two ready for engraving; eight preparing for the engraver, and ten plates have been extensively corrected. One hundred and sixteen charts have been prepared and photolithographed. Sailing-Directions of the West Coast of Africa, vol. 1, of the Cape de Verde Islands, Notes on the Patagonian Channels and the Straits of Magellan; the Fourth Supplement of Papers on the Northern and Eastern Extension of the Gulf Stream, and the Foreign Light-Lists for 1874, have been completed and issued, as also the Hydrographic Notices and Notices to Mar-

* The ship at Wilmington was open at various parts of the hull for convenience of access; thus wanting in perfect continuity.

iners, as information was received, together with several papers on subjects pertaining to hydrography.

A new meteorological journal has been prepared and issued for the purpose of collecting information for the correction and continuance of the wind and current charts.

Directions for the navigation of the northwest coast of Spain and the coast of Portugal, for Madeira, the Salvages and the Canary Islands, and for the Azores have been completed, and for some months have been in the hands of the Congressional Printer.

During the year, 1,338 books of navigation, sailing-directions, &c., and 6,770 charts have been sold to the agents of this Office, besides the supply issued to vessels of the Navy.

The survey in the Pacific Ocean, by Commander Dewey, United States Navy, and the officers of the United States steamer Narragansett, has nearly completed its work on the coasts of the peninsula and in the Gulf of California and the Revilla Gigedo group of islands. This survey has been prosecuted most satisfactorily, and the charts are now in preparation for publication. But little additional work is to be done in the Gulf of California, then, as directed by the Bureau, the vessel would have been employed on the survey of the dangers existing and reported in the Pacific Ocean, and in surveying localities not yet surveyed or only partially surveyed.

It is much to be regretted that this work, so necessary to the safety of commerce, has been delayed owing to the failure of the appropriation asked for its continuance.

An excellent survey of Palmyra, Washington, and Christmas Islands, in the North Pacific Ocean, has been made by Commander Skerrett, United States Navy, and the officers of the United States steamer Portsmouth, the charts of which have been completed and issued.

The running survey of the Gulf coast of Mexico, commenced and carried from the Rio Grande to Vera Cruz, by Commander Baker and officers of the United States steamer Wyoming, has been carried to Laguna de Terminos and completed by Lieut. Commander F. M.Green, and the officers of the United States steamer Fortune. The charts from this survey are being prepared for publication.

Surveys of doubtful points and positions have been made by order of the Bureau under the direction of the commanders-in-chief of squadrons, as vessels could be spared for such service. The results received at this office have been from Commander Howison, United States Navy, commanding United States steamer Shawmut, Commander A. V. Reed, United States Navy, commanding United States Steamer Kansas, and Commander Mahan, commanding United States steamer Wasp.

I would again respectfully call the attention of the Bureau to the necessity of enlarged accommodations for this Office, and to the risk which is incurred by the building now occupied being neither fire-proof nor having any fire-proof attachment.

I have also submitted the estimate for continuing the Pacific survey, as appropriated for in the year ending June 30, 1874, and an estimate for engraving a Great Circle and Wind and Current Chart of the North Atlantic Ocean on a gnomonic projection.

Very respectfully, your obedient servant,

R. H. WYMAN,
Commodore U. S. Navy and Hydrographer.

Commodore DANIEL AMMEN,
Chief of Bureau of Navigation.

UNITED STATES NAVAL OBSERVATORY,
Washington, October 17, 1874.

SIR: I have the honor to submit the following report of the observatory for the current year:

ASTRONOMICAL WORK.

The great equatorial.—Shortly after the date of the last annual report the 26-inch equatorial, ordered from Alvan Clark & Sons, in 1870, was received and successfully mounted. Its performance has been, on the whole, eminently satisfactory, the defects being principally such as seem necessarily incident to so large an instrument, or such as are to be expected in a construction now tried for the first time. A want of exact achromatism is a defect in all refracting telescopes, which there is no known method of obviating, and which increases with the size of the glass. The effect of changes of temperature on the glass is something quite marked, but becomes troublesome only when after a comparatively warm day the glass is first exposed to the cool air of evening. Observations may then be interfered with for half an hour or longer.

The diurnal movement of the telescope, necessary to make it follow an object, has hitherto been given by means of a small water-wheel in the cellar, which has proved much too powerful for the delicate regulating-apparatus. Alterations to remedy this are about being made by the contractors.

The most important work of this instrument has been micrometric measures of the satellites of Saturn, Uranus, and Neptune.

The satellites of the two latter, which are among the most difficult objects in the heavens, have been observed with an accuracy never before approached, and these observations will lead to a more certain determination of the masses of the respective planets. Work has also been commenced on a list of the closest and most difficult double-stars. Professor Newcomb, with Professor Holden as assistant, has been in charge of this instrument, since its mounting.

The work of the old equatorial has been temporarily suspended in consequence of the absence of Professor Hall to observe the transit of Venus. It is still used for the observations of occultations in connection with the observers of the transit of Venus.

The transit circle.—Until May 29, 1874, this instrument was in charge of Prof. Wm. Harkness, assisted by Prof. J. R. Eastman, Prof. E. S. Holden, and assistants Edgar Frisby and Ormond Stone. Prof. E. S. Holden was detached, November 17, 1873, and assistant A. N. Skinner was assigned to duty on this instrument on the same day. On June 1, Prof. J. R. Eastman was placed in charge of the transit circle, with Messrs. Frisby, Skinner, and Stone, assistants.

This instrument has been employed in observations of the sun, moon, and planets, and of a large list of miscellaneous stars whose places were required, 1st, for the reduction of observations made with the equatorial; 2d, as zero points for the formation of a catalogue from the zone observations made here in the years 1846 to 1849; 3d, for the use of Lieut. G. M. Wheeler, of the United States Engineers, on the reduction of the zenith telescope work of his parties engaged in surveying and exploring the Western Territories.

Observations of "Nautical Almanac" stars have been mostly limited to those necessary for the determination of time and azimuth. Several observations of Coggia's comet were made in July.

The volume of observations for 1872 is daily expected from the press,

and a portion of the transit-circle work for 1873 will be in the hands of the printer by the 25th instant.

During the winter, two series of clock-signals were exchanged with parties of coast-survey observers, to determine the longitude of Key West, and Savannah, Ga. The computation of this work at the observatory is nearly completed.

The transit-circle observing-room is in a very unsatisfactory condition. It is impossible to obtain proper ventilation in the hot days of mid-summer; the roof-shutters do not work well; and, in spite of frequent repairs, they leak in every heavy rain-storm; the track for the reversing carriage is not properly laid, and the arms of the reversing carriage, which are half an inch too near together, require some changes; and the protection of the thermometer, on which the computation for refraction depends, is such that there is frequently an abnormal daily range of 5° or 6°.

It will require at least $1,500 to put this room in good order.

The mural circle.—Prof. M. Yarnall has been engaged in observing, with the mural circle, those stars in the general catalogue whose places were not, as he supposed, sufficiently well determined. They were, for the most part, stars observed but once with the prime vertical transit instrument, and some others, for whose more accurate determination further observations are desirable. The catalogue being thought by many astronomers to have great value, it is desirable to issue a new edition, with such additions as the number of years elapsed since its publication would give us. To this end it is necessary to observe with the mural circle for about another year, and then two years with the transit instrument will give the catalogue great completeness. As this is the only work which Professor Yarnall's years of service will enable him to complete, he desires to carry it forward with energy.

He has reduced all his observations up to date; he has also compared the catalogue with Argelander, Weisse, and other catalogues, and endeavored to root out all the errors, clerical or others, which could be found; he has read the proofs for the volume for 1872, which is daily expected from the press, and has prepared the work of 1873, which is almost entirely ready for printing.

In all his labors he has had the assistance of Professor Lockwood, which has been to him of great value; he has checked all his computations and thereby rendered them of more value, besides copying the work and preparing it for the press.

Theory and tables of the Moon.—This work, which has been interrupted for more than a year by the construction of the great telescope and the preparations to observe the transit of Venus, has been recommenced by Professor Newcomb.

A renewal of the small appropriation for computations is therefore asked for, which it is expected will suffice to prepare the first and second parts of the work for publication.

Transit of Venus.—The commission authorized by section 1 of the act of Congress approved March 3, 1871, entitled "An act making appropriations for the naval service for the year ending June 30, 1872, and for other purposes," and by section 1, of the act approved June 10, 1872, entitled "An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1873, and for other purposes," to expend appropriations for the transit of Venus, held its first meeting on the 22d of July, 1872, when it was duly organized.

Under the specific action and direction of this commission, from time to time the requisite instruments have been selected and made; the

parties have been constituted, the stations adopted, and the work of preparation and instruction has been carefully matured and strictly executed.

At the meeting of the 9th of February, 1874, it was decided to invite Dr. Henry Draper, of New York, to take charge of the work of putting into successful execution the various operations necessary for photographing the transit of Venus by the methods decided upon by the commission, and of instructing the parties in those operations. Dr. Draper accepted this arduous duty, and performed it in a manner which commands the gratitude and respect of the commission. Dr. Draper declined to receive any compensation or re-imbursement for his invaluable services and for his unavoidable personal expenses while traveling and residing in Washington, on the service of the commission.

The system of practice was fully carried out, and the several parties destined for the observation of the transit of Venus in both hemispheres, left the United States fully qualified in all respects to perform their duties.

Instructions for conducting the scientific operations of the parties were prepared by Professor Newcomb, printed, and freely distributed.

Meteorological Department.—This department has been in charge of Professor Eastman; and the usual observations with the barometer, and the dry, wet, and solar thermometers have been made at 0^h, 3^h, 6^h, 7^h, 9^h, noon; 3^h, 6^h, 9^h, on each day.

The observations in 1872 have been printed only in the large annual volume; but, in order to accommodate our large number of meteorological exchanges, the observations of 1873 have already been printed, and 200 extra copies obtained to supply immediately the wants of our meteorological correspondents. These extra copies of the meteorological work will enable the Observatory to save the expense of an equal number of annual volumes in exchanging with those who furnish us only with meteorological data, and who are not interested in the bulky volume of astronomical data which has hitherto been furnished them.

Chronometers.—There are at present 43 chronometers under comparison, of which 25 are ready for issue; the remainder are under trial. Twenty-one have been sent to Messrs. Negus for repairs, and 8 others are awaiting an opportunity to be sent for that purpose. Sixty-eight have been received from Messrs. Negus, repaired and cleaned. During the year, 87 have been received from all sources, and 64 issued for use. The latter number includes 8 break-circuit sidereal and 28 mean-time chronometers issued to the different parties sent out to observe the transit of Venus. Twenty have been condemned and withdrawn from service by order of the Bureau, 4 of which were for irregularity of performance, and 16 for age.

Messrs. Negus, of New York, have for the past year done the repairing of such chronometers as have needed it, and have at the present 29 box, and 2 pocket, chronometers, undergoing repairs, together with 19 watches sent to them for repairs by order of the Bureau. The officers at present in charge of these are Commander A. T. Snell, from the 13th instant; Lieut. Comd'r C. H. Pendleton, from December 8, 1873, and Lieut. C. H. Arnold, from April 13, 1874. Capt. A. W. Johnson was detached June 22; Lieut. Comd'r S. W. Terry, July 10, and Lieut. L. G. Palmer, August 15.

During the absence of Mr. W. F. Gardner, instrument-maker, who is attached to Professor Hall's party to observe the transit of Venus, such of his duties as pertain to chronometers and batteries have devolved upon his assistant, Mr. George Anderson.

The routine duties connected with the care of chronometers have been fully described by Capt. A. W. Johnson in his report of 1873.

The library.—During the year there have been added to the library 203 volumes on the subjects of Astronomy, Magnetism, Meteorology, Geodesy, Mathematics, and others more or less directly related to the purposes of the Observatory, besides a much larger number of pamphlets presented by learned societies, or their respective authors. Much the larger proportion of all these has accrued to the library, as heretofore, by the exchange of its own publications, which are thus building up a collection promising to excel in its scientific character most if not all found elsewhere in this country. These exchanges are maintained by the prompt distribution, at home and abroad, chiefly of the annual volume of our Astronomical and Meteorological Observations. In the distributions of the volume for 1871, received on the 8th of January last, the Observatory has been again placed under obligations to the Resident Legations of foreign countries, to our Department of State, and largely to the Smithsonian Institution.

Proposed erection of quarters for observers.—One of the most serious wants of this establishment is that of quarters for the observers. At the present time, in order to keep up observations with all due regularity, the officer is obliged to leave his bed at any and all hours of the night, and walk a distance ranging between half a mile and two miles, much of the way through a thinly-settled portion of the city. Few can continue this exhausting practice for any considerable length of time. The difficulty of procuring near the Observatory a residence which is at the same time cheap, healthful, and decent, is such that only two of the nine observers reside within a mile of it, while two reside at a distance of two miles. There is, moreover, no street-railroad within half a mile. I know of no Observatory in the world so difficult of access, in which quarters for the observers are not supplied, and I am persuaded that there is none such.

It is proposed to commence with quarters for the officers in charge of the great telescope and the meridian observations, which will supply the principal want in question. If best to begin with a single house, then one for the officer in charge of the great telescope, should be first built.

I have the honor to be, very respectfully, your obedient servant,

C. H. DAVIS,
Rear-Admiral, Superintendent.

Commodore DANIEL AMMEN, *U. S. N.*,
Chief of Bureau of Navigation, Navy Department.

NAUTICAL-ALMANAC OFFICE,
Washington, D. C., October 23, 1874.

SIR: I have the honor to submit the following report of the operations of this Office during the past year:

The preparation of the American Ephemeris and Nautical Almanac has continued as in previous years. The Ephemeris for each year comprises all relating to the places of the sun, moon, principal planets, and standard stars, that is desired by astronomers in such a work. During the past year nearly 340 copies have been sold, and 750 have been distributed to the ships and stations of the Navy; to the surveying and exploring parties of the Army, the Coast Survey, and the Land Office; to observatories and astronomers, and to various colleges and other

public institutions, especially to those in which astronomical observations or investigations are conducted.

A smaller volume, containing the first half of the complete Ephemeris, is published for the use of navigators. More than 4,000 copies of the Almanac for each year are required for the supply of merchant-ships.

There have been printed during the year 200 copies of the Ephemeris for 1874; 700 of the Ephemeris for 1875; 500 of the Ephemeris for 1877; 300 of the small Almanac for 1874; 3,300 of the small Almanac for 1875; 1,000 of the small Almanac for 1877; 200 of the Star Tables of the American Ephemeris; 300 of tables of logarithms of sines and cosines, with the argument in time, and 200 of tables for finding the latitude of a place by altitudes of Polaris. The last two are small pamphlets of a few pages, extracted from the Ephemeris for 1877.

The small Almanac for 1877 was received from the printer in April, and the complete volume for 1877 in August of the present year.

The greater part of the Ephemeris for 1878 has been prepared, and it is expected that the entire volume will be completed before next April. The ephemeris of the sun and a part of that of the moon, for 1879, have also been prepared.

Arrangements have been made for the computation of ephemerides of twenty-six of the forty-one small planets discovered by American astronomers. But the appropriation of only $2,000 in the present fiscal year will compel the omission of some of them. Four thousand dollars are required each year to take up all of this class of work, which should be done in this country; and it is hoped that this sum will be appropriated for that purpose in the next fiscal year. I have already submitted estimates for that year.

I am, very respectfully, your obedient servant,

J. H. C. COFFIN,
Professor of Mathematics, U. S. N., Superintendent.

Commodore DANIEL AMMEN, *U. S. N.*,
Chief of Bureau of Navigation, Navy Department.

UNITED STATES NAVAL SIGNAL-OFFICE,
Annapolis, Md., October 23, 1874.

SIR. I have the honor to submit the following report of the operations of this Office during the past year:

In November and December, 1873, a series of experiments in night-signaling was made with the Murphy flash and signal lantern, and Coston's improved signal-lights, the Larrabee cipher code examined and modified, and a naval tactical signal-book prepared, which was approved fo and issued by the Navy Department in January of the present year, and used by Rear-Admiral Case in manœuvering the united fleets under his command in Florida Bay. Having been detailed for duty, under the rear-admiral, during this period, my office was closed, and its business transferred to the Bureau.

During the months of May, June, and July various systems and methods of both day and night signaling were examined and tested, each being subjected to a thorough trial, and its merits reported upon. Among them were the systems of Ward and Coston; that of the former for both day and night work, and that of the latter for night use only.

In July an elaborate series of experiments was made with signal-bombs thrown from mortars, with which further experiments are about being made.

Since the 1st of August the Naval General Signal-Book has been undergoing a thorough revision.

During the year a careful supervision has been exercised over the signal departments of the various vessels in the service, as shown in their quarterly reports and returns, required by the circular-order of the Bureau, of July 18, 1869. These reports and returns have been regularly made, and are generally satisfactory.

Since the issue by the Bureau of Navigation of the American edition of the International Code of Signals, there has been nothing to prevent perfect communication between vessels of the Navy and of the merchant-marine, and the adoption of this code by all merchantmen should be enforced by legal enactment, if necessary.

For carrying on the operations of this Office during the ensuing fiscal year, the sum of $1,000 will be sufficient for the various items of expense, as follows:

Office-rent	$180
Laborers' wages	540
Contingent expenses	280
	1,000

Very respectfully,

FOXHALL A. PARKER,
Commodore and Chief Signal-Officer, U. S. N.

Commodore DANIEL AMMEN, U. S. N.,
Chief of Bureau of Navigation.

BUREAU OF NAVIGATION.

Estimate of appropriations required for the service of the fiscal year ending June 30, 1876, by the Bureau of Navigation.

FOR THE SUPPORT OF THE BUREAU OF NAVIGATION.

For salary of chief clerk, (act approved July 5, 1862, section 3)	$1,800
For salary of one clerk of third class, (act of July 23, 1866, section 8, and July 12, 1870, section 1)	1,600
For salary of one clerk of second class, (act of July 23, 1866, section 8, and July 12, 1870, section 1)	1,400
For salary of messenger, (act of July 5, 1862, and proviso of March 3, 1869)	840
For salary of laborer, (act of February 25, 1863, and proviso of March 3, 1869)	720
For contingent expenses	800
Total	7,160

Estimate of appropriations required for the service of the fiscal year ending June 30, 1875, by the Bureau of Navigation.

A.

1.—FOR NAVIGATION.

For foreign and local pilotage, and towage of ships of war	$50,000
For services and materials in correcting compasses on board ship, and for adjusting and testing compasses on shore	3,000
For nautical and astronomical instruments, nautical books, maps, charts, and sailing directions; and for repairs of nautical instruments for ships or war	10,000
For books for libraries of ships of war	3,000

For navy signals and apparatus, namely, rockets, signal-lights and lanterns, including running-lights; and for drawing and engraving for signal-books.	$6,000
For compass-fittings, including binnacles, tripods, and other appendages of ships' compasses	5,000
For logs and other appliances for measuring the ship's way, for leads and other appliances for sounding	5,000
For lanterns, lamps, and their appendages, for general use on board ship, including those for cabin, wardroom, steerage, holds, spirit-room, deck, and quartermaster's use	5,000
For bunting and other materials for flags, and for making and repairing flags of all kinds	5,000
For oil for ships of war, other than that used in the engineer department; for candles, when used as a substitute for oils in binnacles and running-lights; for chimneys and wicks, and for soap used in the navigation department	20,000
For stationery for commanders and navigators of ships of war, and for use of courts-martial	2,000
For musical instruments and music for ships of war	1,000
For steering signals and indicators, and for speaking-tubes and gongs, for signal-communication on board ships of war	2,500
Total	117,500

2.—FOR NAVIGATION CONTINGENT.

For freight and transportation, postage and telegraphing on public business, advertising for proposals, packing-boxes, and materials, and all other contingent expenses	$4,000

3.—FOR NAVIGATION HYDROGRAPHIC WORK.

For drawing, engraving, printing, and photolithographing charts, correcting old plates, preparing and publishing sailing directions, and other hydrographic information	$30,000
For making charts, including those of the Pacific coast	30,000
For fuel, lights, and office-furniture, care of building and other labor; purchase of books for library, drawing-materials, and other stationery; postage, freight, and other contingent expenses	5,000
For rent and repair of building	2,800
For continuing survey in the Pacific Ocean	40,000
For engraving great circle and wind and current chart of the North Atlantic Ocean	3,500
	111,300

B.

1.—FOR NAVAL OBSERVATORY.

Three assistants, at $1,500 each	$4,500
For one clerk	1,800
For wages of one instrument-maker, three watchmen, one messenger, and one porter; keeping grounds in order and for repairs of buildings and inclosures, fuel, lights, and office-furniture, purchase of books for library and chemicals for batteries, stationery, freight, and other incidental expenses. (The usual appropriation of $13,500 was reduced by Congress for the current year by the sum of $3,500. The reduced sum has proved entirely inadequate for the maintenance of the observatory and preservation of buildings)	13,500
For continuing special investigations of the motions of the moon	2,000
For reducing and transcribing astronomical observations for publication	2,700
For reducing observations of the transit of Venus	3,000
	27,500

C.

1.—NAUTICAL ALMANAC.

For pay of computers and clerk for preparing for publication the American Ephemeris and Nautical Almanac	$20,000
For continuance of work on new planets discovered by American astronomers	3,000
For rent, fuel, labor, stationery, boxes, expresses, and miscellaneous items	1,500
Total	24,500

RECAPITULATION.

Estimate of appropriations required for the fiscal year ending June 30, 1876, by the Bureau of Navigation, Navy Department.

FOR SUPPORT OF BUREAU.

Salaries and contingent	$7,160

FOR THE NAVAL SERVICE.

A. 1.—Navigation	117,500
2.—Navigation, contingent	4,000
3.—Navigation, hydrographic work	111,300
B. 1.—Naval Observatory	27,500
C. 1.—Nautical Almanac	24,500
Total	284,800

No. 5.

BUREAU OF YARDS AND DOCKS.

BUREAU OF YARDS AND DOCKS, NAVY DEPARTMENT,
Washington, D. C., September 19, 1874.

SIR: I have the honor to submit the annual report of expenditures at the several navy-yards and stations under this Bureau, during the fiscal year ending 30th of June, 1874. Also estimates for improvements, repairs, general maintenance, contingent and civil establishment at the several yards and stations during the fiscal year ending June 30, 1876.

I have little to add to the statements and recommendations of my last three annual reports, so far as concerns the general condition and need of our navy-yards.

My experience in the administration of this Bureau confirms my belief as to the correctness of those recommendations.

The importance of creating a great navy-yard on the Pacific coast, sheltered by the defenses of San Francisco, and supplied by the resources of that great western city, is apparent to all, and I again urge liberal appropriations to finish its dry-dock, to continue its quay-wall, to supply it with fresh water, to add to its timber-storage, and to improve the roads, now nearly impassable in the rainy season.

On the Atlantic shore our chief naval resource in time of war would be found at New York.

At the New York navy-yard, and at the private docks, ship-yards, and machine-shops within gunshot of it, three-quarters of our fleet would be equipped for hostile operations.

The vast magazines of naval stores, the host of skilled artisans, the immense facilities for fitting and repairing ships, furnished by this great commercial metropolis, would be at once used, directed, and absorbed by the navy-yard.

Its experienced staff of naval constructors, ordnance officers, and equipment officers, under naval command, aided by well-trained foremen and mechanics, long practiced in fitting ships of war, would bring all these

private establishments into harmonious co-operation with the central navy-yard to which they are contiguous.

I give it as my deliberate opinion that the present site of the New York navy-yard is, beyond compare, the best that could be found within the waters of New York; that it is ample in extent, susceptible of immense development at small cost, and in every way perfectly suited to the needs of the naval service.

The appropriation most urgently demanded there is one for the repair and preservation of the valuable cob-dock now in danger of sliding into the channel.

I beg to repeat all that I have said in regard to League Island and Norfolk in my preceding reports, and to urge liberal appropriations for them.

At League Island, the great work-shop and store-house for yards and docks has been finished; the great iron-working establishment for construction is far advanced, and we are now completing a foundation for the still larger building, four hundred (400) feet long, for steam-engineering. The next improvement of great importance is to begin the quay-wall and inclosure for basin, upon which its marine railways, the Bureau of Construction will rely in its ship building and repairing operations.

I would strongly urge the great importance of putting Pensacola in a state of preparation for possible contingencies in the Gulf of Mexico and the West Indies.

The rebuilding of the sectional dock is greatly needed, and a moderate annual appropriation to rebuild the workshops burned during the civil war would soon restore the establishment to its old effectiveness.

Report of expenditures at navy-yards, stations, and Naval Asylum, for fiscal year ending June 30, 1874.

Yards and stations.	Appropriations.					
	Navy-yard or station.	General maintenance.	Civil establishment.	Contingent.	Emergencies.	Totals.
Portsmouth, N. H.	$109,997 91	$87,890 34	$4,399 93	.....	.....	$202,288 18
Boston, Mass	121,264 04	142,870 95	6,899 73	.....	$2,736 25	273,770 97
Brooklyn, N. Y	133,325 85	166,948 63	6,668 19	$9,998 77	3,135 40	320,076 84
Philadelphia, Pa	41,515 65	67,342 77	4,399 97	.....	.....	113,258 39
Washington, D. C	73,662 94	88,636 79	5,400 00	7,330 44	.....	175,030 17
Norfolk, Va	84,525 63	86,406 76	4,219 70	255 44	.....	175,407 53
Pensacola, Fla	34,142 49	38,606 91	3,600 00	17,880 17	8,933 31	103,162 88
Mare Island, Cal	483,116 94	109,388 12	4,985 90	.....	.....	597,490 96
New London, Conn	5,000 00	5,963 32	.....	24 00	.....	10,987 32
League Island, Pa	249,998 68	47,931 27	2,799 96	15,959 34	15,500 00	332,189 25
Sackett's Harbor, N. Y	.....	1,101 77	.....	.....	.....	1,101 77
Mound City, Ill	.....	6,655 14	.....	.....	.....	6,655 14
New Orleans, La	.....	.....	.....	3,821 00	.....	3,821 00
Key West, Fla	6,439 20	1,260 00	.....	.....	.....	7,699 20
Naval Asylum	54,674 53	.....	.....	.....	.....	54,674 53
Totals	1,397,663 86	851,002 77	43,373 38	55,269 16	30,304 96	2,377,614 13

ABSTRACT OF OFFERS FOR SUPPLIES RECEIVED FOR FURNISHING ARTICLES COMING UNDER THE COGNIZANCE OF THE BUREAU OF YARDS AND DOCKS, MADE IN CONFORMITY TO THE ACT OF CONGRESS APPROVED MARCH 3, 1843.

Offers for supplies for the navy-yard at Portsmouth, N. H., under advertisement dated July 9, 1874.

Class. No. 20. Hay and straw:	
Trickey & Jewett	$2,500 00
Geo. A. Hammond	2,370 00
L. L. de Rochement	*2,010 00
John Stokel & Co	2,240 00
Class No. 27. Anthracite coal:	
James & Williams	4,960 50
William H. Size	6,787 50
James Symington	5,505 00
Samuel G. French	5,053 50
D. Babcock & Co	5,137 50
Class No. 27. Anthracite coal—Continued.	
C. E. Walker & Co	*$4,905 00
Howard Snelling & Co	5,197 50
Class No. 29. Cumberland coal:	
William H. Size	1,385 00
Samuel G. French	1,291 50
D. Babcock & Co	1,300 00
C. E. Walker & Co	*1,160 00
Howard Snelling & Co	1,270 00

Offers for supplies for the navy-yard at Boston, under advertisement dated July 9, 1874.

Class No. 20. Hay and straw:	
Trickey & Jewett	*$2,700 00
L. L. de Rochement	2,760 00
A. D. Hoitt	2,775 00
Libby, Sawyer & Co	3,200 00
Scott & Bridge	2,900 00
Class No. 27. Anthracite coal:	
James & Williams	†5,670 00
James Symington	7,051 20
Class No. 27. Anthracite coal—Continued.	
Samuel G. French	*6,585 75
D. Babcock & Co	6,726 00
C. E. Walker & Co	6,630 00
Howard Snelling & Co	6,807 00
Class No. 29. Cumberland coal:	
D. Babcock & Co	‡400 00
Howard Snelling & Co	400 00

Offers for supplies for the navy-yard at Brooklyn, N. Y., under advertisement dated July 9, 1874.

Class No. 20. Hay and straw:	
E. R. Shipman	*2,956 50
Geo. M. Phelps	2,961 00
Samuel G. French	3,240 00
Geo. Spear	3,600 00
Class No. 27. Anthracite coal:	
James Symington	4,961 00
Samuel G. French	*4,689 75
Class No. 27. Anthracite coal—Continued.	
Kelsey & Loughlin	$4,861 25
D. Babcock & Co	4,750 00
Class No. 29. Cumberland coal:	
Samuel G. French	*765 50
D. Babcock & Co	857 50

Offers for supplies for the navy-yard at Philadelphia, Pa., under advertisement dated July 9, 1874.

Class No. 20. Hay and straw:	
Paul J. Field	*$672 00
Nathan Shoemaker	750 00
Class No. 27. Anthracite coal:	
Paul J. Field	$898 50
James Symington	*861 00
Plaisted & McCollin	874 50
Samuel G. French	994 50

* Accepted. † Informal. ‡ By lot.

Offers for supplies for the navy-yard at League Island, Pa., under advertisement dated July 9, 1874.

Class No. 27. Anthracite coal:		Class No. 27. Anthracite coal:	
Paul J. Field	$624 00	Plaisted & McCollin	$598 00
James Symington	*594 00	Samuel G. French	673 00

Offers for supplies for the navy-yard at Washington, D. C., under advertisement dated July 9, 1874.

Class No. 20. Hay and straw:		Class No. 27. Anthracite coal:	
Frank Dorsey	$945 00	John S. Killman	$377 50
Wm. Kiskadden, agent	1,008 00	James Symington	*347 00
Alex. Hunter	*828 00	C. T. Yoder	412 50
Nathan Shoemaker	1,350 00	Class No. 29. Cumberland coal:	
O. E. Heine	972 00	John S. Killman	†425 00
M. J. Ditto	1,152 00	C. T. Yoder	*439 00
C. T. Yoder	1,044 00		

Offers for supplies for the navy-yard at Norfolk, Va., under advertisement dated July 9, 1874.

Class No. 20. Hay and straw:		Class No. 27. Anthracite coal:	
Peters Brothers	*$2,046 68	Robert J. Neely	$837 60
George Reid	2,272 40	C. T. Yoder	942 00
Robert J. Neely	2,169 80	A. A. McCullough	*774 10
C. T. Yoder	2,394 00		
A. A. McCullough	2,272 40	Class No. 29. Cumberland coal:	
Class No. 27. Anthracite coal:		Peters Brothers	286 50
John S. Killman	936 00	Robert J. Neely	280 00
James Symington	808 80	A. A. McCullough	*272 50
Peters Brothers	807 60		

Offers for supplies for the navy-yard at Pensacola, Fla., under advertisement dated July 9, 1874.

Class No. 20. Hay and straw:		Samuel G. French	571 50
Thos. P. Morgan	*$800 00	D. Babcock & Co	*565 00
Robert Pepper	1,000 00	Class No. 29. Cumberland coal:	
Class No. 27. Anthracite coal:		Thos. P. Morgan	$375 00
Thos. P. Morgan	750 00	Samuel G. French	318 25
James Symington	734 50	D. Babcock & Co	*315 00

Opened August 6, 1874, in presence of—
WM. REYNOLDS, *Rear-Admiral, U. S. N.*
WM. P. S. SANGER, *Civil Engineer, U. S. N.*
A. E. MERRITT, *Chief Clerk.*
D. J. PARTELLO, *Clerk.*
NAVY DEPARTMENT, BUREAU OF YARDS AND DOCKS.

* Accepted. † Declined to contract.

Offers to furnish and deliver 998,000 brick at the navy-yard, League Island, Pa., under advertisement of Bureau of Yards and Docks, dated June 20, 1874.

Class No. 1. Bricks:		Class No. 1. Bricks:	
Lloyd & Russell	$15,025 00	Benjamin Allen	*$12,337 00
Edwd. J. Mathews, prest.	12,706 50		

Opened July 21, 1874, in presence of—
WM. REYNOLDS, *Rear-Admiral, U. S. N.*
WM. P. S SANGER, *Civil Engineer, U. S. N.*
A. E. MERRITT, *Chief Clerk.*
D. J. PARTELLO, *Clerk.*
NAVY DEPARTMENT, BUREAU OF YARDS AND DOCKS.

Offers to furnish and deliver 1,000,000 bricks at the navy-yard, Norfolk, Va., under advertisement of Bureau of Yards and Docks, dated July 25, 1874.

Class No. 1. Bricks:		Class No. 1. Bricks:	
Windsor & Ford	*$12,423 33½	S. H. Robinson & Son	†$12,000 00
F. R. Windsor	12,880 00	John Webster	15,670 00
Herrel & Brown	12,840 00	Geo. W. Bowie	†11,415 00
George O. Coake & Co	13,430 50	Young & Hill	12,840 00
John Grinder	15,570 00	A. A. McCullough	15,400 00
D. Pulman & Co	13,930 00		

Opened August 13, 1874, in presence of—
WM. REYNOLDS, *Rear-Admiral, U. S. N.*
A. E. MERRITT, *Chief Clerk.*
D. J. PARTELLO, *Clerk.*
EMIL S. FRIEDERICK, *Draughtsman.*
NAVY DEPARTMENT, BUREAU OF YARDS AND DOCKS.

The following estimates for the fiscal year ending 30th June, 1876, are respectfully submitted:

Sheet No. 1, for support of Bureau of Yards and Docks	$15,280
Sheet No. 2, general maintenance of yards and stations and contingent	910,000
Sheet No. 3, support of Naval Asylum	53,723
Sheet No. 4, repairs and preservation at navy-yards	591,500
Sheet No. 5, improvements at navy-yards	1,200,000
Total estimates of Bureau of Yards and Docks	2,770,503

I am, sir, very respectfully, your obedient servant,

C. R. P. RODGERS,
Chief of Bureau.

Hon. GEO. M. ROBESON,
Secretary of the Navy.

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* Accepted. † Informal.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Bureau of Yards and Docks, Navy Department.

Detailed objects of expenditure and explanations.		Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
SALARIES.			
Chief clerk, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3)		$1,800 00	.....
Draughtsman and clerk, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1)		1,800 00	.....
One clerk of class four, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1)		1,800 00	.....
Two clerks of class three, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1)		3,200 00	.....
One clerk of class two, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1)		1,400 00	.....
One clerk of class one, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1)		1,200 00	.....
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3)		840 00	.....
Two laborers, at $720 each, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3)		1,440 00	.....
		13,480 00	$13,480 00
CONTINGENT EXPENSES.			
Stationery, books, plans, drawings, incidental labor, and miscellaneous items, (appropriated)		1,800 00	1,800 00
FOR GENERAL MAINTENANCE OF YARDS AND DOCKS.			
For general maintenance of yards and docks; freights and transportation of materials and stores; printing, stationery, and advertising, including the commandants' offices; books, maps, models, and drawings; purchase and repair of fire-engines; machinery and patent right to use the same; repairs of steam fire-engines and attendance on the same; purchase and maintenance of oxen, horses, and driving teams; carts and timber-wheels, for navy-yard purposes; tools and repairs of the same; postage on letters and other mailable matter on public service, and telegrams; furniture for Government houses and offices in navy-yards; coal and other fuel; candles, oil, and gas; cleaning and clearing up yards, and care of public buildings; attendance on fires, lights, fire-engines and apparatus; incidental labor at navy-yards; water-tax; tolls and ferriages; pay of watchmen in navy-yards; awnings, and packing-boxes for Bureau of Yards and Docks purposes		860,000 00	760,000 00
CONTINGENT.			
For contingent expenses that may arise at navy-yards and stations		50,000 00	40,000 00
Amount appropriated December 31, 1873, to meet extraordinary expenses		.....	20,000 00
NAVAL ASYLUM, PHILADELPHIA, PA.			
Superintendent	$600 00		
Steward	480 00		
Matron	360 00		
Cook	240 00		
Assistant cook	168 00		
Chief laundress	192 00		
Three laundresses, at $168 each	504 00		
Eight scrubbers and waiters, at $168 each	1,344 00		
Six laborers, at $240 each	1,440 00		
Stable-keeper and driver	360 00		
Master-at-arms	480 00		
Corporal	300 00		
Barber	360 00		
Carpenter	845 00		
		7,673 00	7,673 00
Furnaces, grates, and ranges	300 00		
Water-rent and gas	1,800 00		
Increase of library and car-tickets	250 00		
Furniture and repairs of same	1,750 00		
Cemetery and burial expenses	300 00		
Repairs and preservations	1,650 00		
Support of beneficiaries	40,000 00		
		47,050 00	45,600 00
		53,723 00	53,273 00

NOTE.—The expenses of the Naval Asylum to be paid from income of the Navy-pension fund, in compliance with provisions of act of March 1, 1869, 15 Statutes.

Estimates of appropriations required for the fiscal year, &c.—Continued.

Detailed object of expenditure and explanations.		Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
REPAIRS AND PRESERVATION AT NAVY-YARDS.			
Navy-yard, Portsmouth, N. H		$25,500 00	.....
Navy-yard, Boston, Mass		100,000 00	.....
Navy-yard, Brooklyn, N. Y		135,000 00	.....
Navy-yard, Philadelphia, Pa		15,000 00	.....
Navy-yard, Washington, D. C		20,000 00	.....
Navy-yard, Norfolk, Va		90,000 00	.....
Navy-yard, Pensacola, Fla		85,000 00	.....
Navy-yard, Mare Island, Cal		115,000 00	.....
Naval station, Sackett's Harbor, N. Y		1,000 00	.....
Naval station, New Orleans, La		5,000 00	.....
		591,500 00	$500,000 00
Navy-yard, Boston, Mass.:			
For iron-plating shop	$100,000 00		
For commencing boundary wall	20,000 00		
For yards and docks workshop, and store-house	35,000 00		
For new floor at rope-walk	32,250 00		
For main entrance gate-way	13,000 00		
For commencing coal-house	30,000 00		
		230,250 00	.....
Navy-yard, Brooklyn, N. Y.:			
For continuation of work on cob-dock	30,000 00		
For continuation of wall on Flushing avenue	15,000 00		
For police-station	10,000 00		
For coal-house	50,000 00		
For dredging channels	10,000 00		
		115,000 00	.....
Navy-yard, Norfolk, Va.:			
For commencing coal house No. 51	50,000 00		
For commencing timber-shed No. 32	50,000 00		
		100,000 00	50,000 00
Navy-yard, Pensacola, Fla.:			
For commencing timber-shed, joiner-shop, and cistern	40,000 00		
For commencing rigging and sail loft	30,000 00		
		70,000 00	250,000 00
Navy-yard, Mare Island, Cal.:			
For continuing stone dock	450,000 00		
For removal of gas-works from site needed for dry dock	6,750 00		
For commencing reservoir and water-pipes	50,000 00		
For roads and pavements	40,000 00		
For commencing quay-wall and wharves	50,000 00		
For commencing timber-shed	48,000 00		
		644,750 00	250,000 00
New London, Conn.:			
For continuation of yard	40,000 00		
		40,000 00	50,000 00
Navy-yard League Island, Pa		.....	300,000 00
		1,200,000 00	900,000 00

No. 6.

BUREAU OF ORDNANCE.

BUREAU OF ORDNANCE, NAVY DEPARTMENT,
October 30, 1874.

SIR: I have the honor to submit the annual report of this Bureau, with accompanying estimates, for the fiscal year ending June 30, 1876.

Besides the ordinary duties of preparing our ships for service, and preserving the public property placed under its charge, the Bureau has continued its examination into the various important questions enumerated in its last annual report, and which are briefly discussed in the

succeeding paragraphs, each under its respective heading. Additional to these are mentioned the experiments of Mr. Norman Wiard at Nut Island, resumed during this summer, but not yet completed. At their conclusion a separate and detailed report will be made to the Department.

The most important operations of the Bureau occurred during November and December of last year, on the occasion of the seizure of the Virginius by a vessel of war of the Spanish navy.

It was deemed advisable to immediately arm and equip every available ship of the Navy then in the ports of the United States.

The complete and rapid armament of so many ships, including iron-clads and the largest frigates, although a heavy task, was nevertheless successfully performed without the omission of a single important detail. The exertions made were commensurate with the exigencies of the occasion, and involved a large accumulation of stores, nearly all of which, however, are still available for future operations.

RIFLED CANNON.

The organization of our ordnance dates from 1845, and from that period it has been fully recognized in the Navy that our ships should compensate for inferiority of numbers by superior armament of individual ships; and so long as the smooth-bore formed the batteries, that superiority was maintained by a limited number of powerful guns.

With the introduction of iron-clads, and the universal adoption of rifled cannon by other powers, we are forced to adopt the same armament; otherwise we shall, if engaged in war with even a second-rate power, find ourselves overmatched, not only in numbers, but power of individual ship. There is, however, no reason why our ships, heretofore superior to all others in armament, shall not be restored to equality.

The Bureau, therefore, recommends the entire re-armament of the Navy with breech-loading rifled cannon, which can be done at a very small cost in the present reduced state of number of ships and guns required.

With wooden ships the mere lodgment of a shell in the side before the explosion might inflict a fatal injury; but against armored or even wooden-cased double-bottomed ships, complete perforation and explosion of a large charge within is essential.

The present types of foreign armored cruising-ships carry from 4½ to 6 inches of armor; and at present we have no guns, except the 15-inch in the monitors, which will seriously injure the lightest of these armored vessels. Substitute a 7-inch or 8-inch rifle for the 11-inch smooth-bore, which even our smallest ships carry, and few of them would come off without great damage.

The sphere of offense of the monitors does not extend beyond 500 yards, which might be increased to 3,500 yards by the substitution of an efficient rifle of the same weight of 10-inch or 11-inch caliber for the 15-inch smooth-bore.

WIARD'S EXPERIMENTS.

The experiments of Mr. Norman Wiard on the conversion of smooth-bores to rifled cannon on his system commenced last autumn, and since continued under the nominal supervision of this Bureau, have not developed any new or unexpected results. A single shot was fired from each of two 15-inch guns of the Army pattern, one in its original state with round shot of 450 pounds weight and a charge of 140 pounds of

powder; the other rifled on Mr. Wiard's plan, with a pointed shot of the same weight and same charge of powder at similar targets composed of five 3-inch plates set up at a distance of 160 feet. The first broke up the plates; the second penetrated them. A few fires for comparative ranges were then made and the experiments suspended. The recoil, as was to be expected with a charge nearly treble that for which the gun was designed, was such (24 feet) as to be entirely uncontrollable in the turret of a monitor or indeed anywhere in service. This element it is essential to consider, for, notwithstanding the improvements in powder which are equivalent to an increased strength in the gun, the weight of the gun is designed for a 50-pound charge.

It would appear to those unacquainted with artillery practice that a great result had been obtained, but a comparison with other experiments will show that nothing new has been developed. Whitworth has fired a 9-inch shell of 404 pounds, propelled by 50 pounds of powder, through three 5 inch plates interlaminated with two 5-inch layers of iron concrete, (made of iron turnings and lead,) the whole forming a mass 25 inches thick. An equal result has been produced by the English 10-inch gun, firing a 400-pound shell with 70 pounds of powder at a distance of 1,000 yards. And by the Krupp 26-cm., firing 57 pounds of powder and 415-pound shot. Thus showing that with well-proportioned guns, projectiles and charges, the disproportionate and dangerous charges of Mr. Wiard are useless.

The experiments were resumed in September of this year, and at the thirteenth fire, with heavy charges and at the distant target, the rifled gun burst, the target not having been hit. This result I anticipated, and do not hesitate to declare that it is impossible to convert a cast-iron smooth-bore into an efficient rifle by any system of rifling.

Since this draught was prepared the Bureau has received a report of the burst, at the first fire, of a second 15-inch gun, Navy pattern, rifled on Mr. Wiard's plan, firing a charge of 180 pounds, and a sub-calibered shot of 492 pounds, aimed at a 30-inch target.

No person in the least acquainted with ordnance could hope to fire half a dozen such charges; therefore even if successful in a single fire no useful result was to be expected from the experiment.

The principal advantages of rifled projectiles consist in their greater penetration, due to the concentration of effect on a smaller and better form of surface; next in greater content of explosive for same caliber, then range, and lastly accuracy.

Since the weight of the gun is fixed by the construction of the vessel and the recoil cannot exceed certain well-defined limits, the conditions of caliber of gun, length of bore, weight of projectile, and charge of powder, are also fixed within close limits, and cannot be departed from without a loss of effect.

For these reasons neither the 15-inch nor 11-inch Navy guns can be converted into efficient rifles on any plan; even by reducing and lining the bore. They are too short to properly utilize a proportionate charge of suitable powder; nor can they be converted to breech-loaders, which the Bureau considers the essential feature of any rifled system.

POWDER.

The experiments on the improvement of powder have been prosecuted as far as limited means will permit, and the general questions of manufacture settled.

Our stock of gunpowder had been allowed to fall quite low during

the prosecution of these experiments, and last autumn a quantity was ordered, necessarily at a most unfavorable season. Fortunately, circumstances did not require immediate delivery, as the difficulties of manufacturing uniform powder in winter are very great. The Bureau submits the propriety of an appropriation for gradual increase of our stock.

BREECH-LOADING HOWITZERS.

The subject of increased efficiency of our boat and field artillery has attracted the earnest attention of the Bureau, which has prepared model guns of two classes: a light howitzer of 350 pounds, adapted to all boats, even the smallest; and a heavier one, of 500 pounds, firing the same projectile with different charges.

They are on two systems: one a wedge-breech, on the plan of Mr. B. B. Hotchkiss; the other a slotted screw. Both use metallic cartridges, which, in the opinion of the Bureau, is the best plan, and overcomes several objections to breech-loaders. The latter can, however, use the common cartridge-bag.

They are mounted on carriages which give 30° elevation, 45° depression, the latter condition being very useful as a defense against torpedo-boats. The model guns are completed in bronze, but the construction is stopped for want of funds, and because suitable steel blocks cannot be supplied by any of our steel manufacturers.

GATLING-GUNS.

Fifty of the small Gatling-guns have been purchased, a suitable carriage devised, and they are now ready for issue to the service.

This gun, too, has been arranged to fire down at great depression, a very important condition for a gun designed to be used in the tops and for firing into boats close alongside; some difficulties relative to feeding in this position remain to be overcome.

TORPEDO STATION.

The general character of the instruction at this station is given in the accompanying report of the board detailed to witness the examination of officers under instruction.

During the past year it has supplied complete outfits of torpedoes and electrical apparatus to all our cruising-ships, and the mechanical facilities of the station are sufficient for any probable future exigency. The assembly of ships at Key West afforded opportunity for extensive practice, developing defects of our system, and causing remedies to be applied. Frequent reports are made to the Bureau from cruising-ships of the efficiency of the apparatus now supplied.

The course of instruction was interrupted last autumn by the detachment for sea-service of most of the class before the completion of the course. In ordering a new class it was deemed advisable to utilize more of the favorable season for experimental practice. This has resulted in marked benefits.

The principal defect observed is, that the majority of the officers ordered for instruction go there expecting to be taught, not for the purpose of personal investigation and to learn from the great facilities placed at their disposal. Few have either the aptitude or application necessary for theoretical study. Nor does it appear to be necessary for the majority to take more than a practical course. Those who develop

particular aptitude, and those only, should be retained for further instruction during the winter.

It is also necessary that the officers of the station should be relieved of the routine instruction, and allot some time for independent theoretical and practical investigation, otherwise no progress will be made.

The torpedo school differs from most scientific and practical institutions in that there are no text-books, and few points determined by experiment. The whole subject is yet in an indefinite state, and some body of facts must be accumulated in order to have a subject to teach.

The torpedo-boats "Intrepid" and "Alarm" have been completed, but owing to the advanced season few experiments have been made with either to determine their capabilities.

The experiments recently made abroad show that little reliance is to be placed on stationary torpedoes for the defense of important harbors. The radius of destructive effect being quite limited, these machines must be very numerous, entailing a complication of cables and great risk of accident and failure. This Bureau is therefore of the opinion that for the defense of our large harbors (such as New York) the aid of the Navy, with monitors as bases for movable torpedoes, and swift torpedo-boats, will be required.

The movable torpedo, yet in its infancy, is receiving great attention as well as other methods of attacking iron-clad vessels beneath their armor.

This new element is, however, attracting the serious attention of all maritime powers, and is destined to play an important part in future naval operations. We are at least as far advanced as others, but I take leave to recommend liberal appropriations for experiments to develop the capabilities of this most important means of offense and defense.

I have the honor to be, with high respect, your obedient servant,

WILLIAM N. JEFFERS,
Chief of Bureau.

Hon. GEO. M. ROBESON,
Secretary of the Navy.

TORPEDO STATION,
Newport, R. I., October 23, 1874.

SIR: We have the honor to submit herewith our report of the examination of the graduating class of students attached to this station, which we have witnessed, in accordance with the orders of the Department.

The following are the subjects of examination, viz:

Electricity.

Explosives.

Fuse-making.

The management and use of all kinds of torpedoes under different circumstances; and experiments made with various explosives.

It is very satisfactory to the board to be able to say that these examinations, both in the manner in which they were conducted and in the proficiency of the students, afford the strongest assurance of the competency and fidelity of the instructors, as well as of the zeal and capacity of the students.

The board is persuaded that the objects pursued at this station, the

course of instruction and discipline, and their special and general results, promise to be of vital importance to the future usefulness and efficiency of the naval service.

We have the honor to be, very respectfully, your obedient servants,

C. H. DAVIS, *Rear-Admiral and President.*
A. C. RHIND, *Captain.*
RICHARD W. MEADE, *Commander.*
W. A. KIRKLAND, *Commander.*
CHESTER HATFIELD, *Commander.*

Hon. GEO. M. ROBESON,
Secretary of the Navy.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Bureau of Ordnance, Navy Department.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
SALARIES.		
Chief clerk, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8)	$1,800 00	
Draughtsman, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1)	1,800 00	
One clerk of class three, per act of July 12, 1870, (16 Stat. at L., p. 249, sec. 1)	1,600 00	
Two clerks of class two, same act	2,800 00	
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and March 3, 1869, (15 Stat. at L., p. 287, sec. 1)	840 00	
One laborer, per act July 12, 1870, (16 Stat. at L., p. 250, sec. 3)	720 00	
Total	9,560 00	$9,560 00
CONTINGENT EXPENSES.		
Stationery, books, and miscellaneous items, (appropriated act June 20, 1874)	800 00	800 00
ORDNANCE AND ORDNANCE STORES.		
Fuel, tools, and material of all kinds necessary in carrying on the mechanical branches of the Ordnance Department of the several navy-yards, magazines, and stations, (appropriated act of June 6, 1874)	122,026 00	
Labor at the several navy-yards, magazines, and stations, (appropriated act of June 6, 1874)	300,145 00	
Necessary repairs to ordnance buildings, magazines, gun-parks, boats, lighters, wharves, machinery, and appendages, (appropriated act of June 6, 1874)	44,483 00	
Miscellaneous items, to wit: freight to foreign and home stations, advertising and auctioneers' fees, cartage and express charges, repairs to fire-engines, gas and water pipes, gas and water-tax at magazines, toll, ferriage, foreign postage, telegrams, &c., (appropriated act of June 6, 1874)	8,152 00	
Total	474,806 00	
IMPROVEMENTS, AS FOLLOWS, VIZ:		
Navy-yard, Boston, Mass., at magazine, Chelsea:		
For general repairs, grading, and improving the grounds at magazine, Chelsea, (submitted)	1,500 00	
Navy-yard, Brooklyn, N. Y., at the ordnance dock:		
To the crib-work on the east and southeast face of the ordnance dock, filling in, grading, and improving said dock, planking face of the dock, laying iron shot-beds, laying rail-track between the avenues of gun-park, to facilitate moving of guns, &c., (submitted)	25,000 00	
Navy-yard, Philadelphia, Pa., at magazine, Fort Mifflin:		
Brick cook-house, ten by twelve feet, to take the place of present wooden one, (submitted)	300 00	
Brick kitchen, adjoining gunner's residence, to take the place of present wooden one, (submitted)	2,000 00	
Shed on wharf, for loading and unloading shells, (submitted)	850 00	

Estimates of appropriations required for the service, &c.—Continued.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
IMPROVEMENTS—Continued.		
Navy-yard, Norfolk, Va., at magazine:		
Powder-boat, for transportation of powder to and from the magazine, (submitted)	$6,000 00	
Force and lift pump, necessary for use at Saint Helena, (submitted)	42 00	
Fire-engine, (submitted)	750 00	
Magazine, Mare Island:		
Fitting up racks in new magazine for storage of powder, (submitted)	2,275 00	
Fence inclosure of new magazine, (submitted)	1,600 00	
Grading, graveling, and brick drains for new and old magazines, (submitted)	2,558 00	
Small magazine, for receiving on storage filled powder-tanks, for ships in commission, (submitted)	5,250 00	
Completing windows, doors, shutters, &c., at new magazine, (submitted)	1,500 00	
TORPEDO CORPS.	524,431 00	$340,000 00
Purchase, manufacture, and preservation of gunpowder, nitro-glycerine, gun-cotton, &c., (appropriated, act of June 6, 1874)	12,000 00	
Purchase and manufacture of electrical apparatus, galvanic batteries, and insulated wire, (appropriated, act of June 6, 1874)	15,000 00	
Purchase of copper, iron, wood, and other materials necessary for the manufacture of torpedoes, and for work on the same, (appropriated, act of June 6, 1874)	27,000 00	
Construction of torpedo-boats, purchase of copper-work, hulks, and contingent expenses, (appropriated, act of June 6, 1874)	28,500 00	
Labor, including one chemist, pyrotechnist, electrician, one foreman machinist, and one writer, (appropriated, act of June 6, 1874)	15,000 00	
Repairs to buildings and wharves, and material and labor for sea-wall, (appropriated, act of June 6, 1874)	2,500 00	
CONTINGENT.	100,000 00	98,000 00
Contingent expenses of the ordnance service of the Navy, (appropriated, act of June 6, 1874)	1,000 00	1,000 00

Respectfully submitted.

WILLIAM N. JEFFERS,
Chief of Bureau of Ordnance.

AUGUST 26, 1874.

No. 8.

BUREAU OF MEDICINE AND SURGERY.

NAVY DEPARTMENT,
BUREAU OF MEDICINE AND SURGERY,
October 31, 1874.

SIR: I have the honor herewith to submit the annual report of this Bureau for the past year.

NAVAL HOSPITAL FUND.

The first subject to which I would respectfully invite your attention is the condition of the naval-hospital fund, to which also urgent reference was made in the last annual report. This fund is not, and from the necessity of the case cannot be, self-sustaining. The two sources from which its income is derived produce a sum that may be calculated in advance with almost absolute precision. These are "hospital money," which is deducted from the pay of every officer, seaman, and marine in

the Navy, at the rate of twenty cents per month, and "stopped rations," charged at the rate of thirty cents per diem for every officer and man subsisted at the expense of the hospital department. On a basis of 8,500 men and about 1,500 officers, representing the legal strength of the Navy, or 10,000 persons in all, the former would yield $24,000 per annum, and the latter, taking an average of the last five years, may be counted on to yield an amount not exceeding $15,000, making the round sum of about $39,000. These sums are transferred by the Treasury Department to the credit of the naval-hospital fund, not at regular and stated intervals, but from time to time, and in larger or smaller amounts, as balances are found to be due on the settlement of paymasters' accounts. The status of the fund is therefore a very precarious one, and may fluctuate at any given period between moderate ease and complete exhaustion. Of late years, however, as a general rule, the credits have been on the smallest possible scale, and it is now well understood at the Treasury that no back or reserved credits, of any considerable amount for former years, remain to be made to it. During the last twelve months the transfers from all sources have not exceeded $112,470.70, but no transfer, except of the most trifling character, is possible in the coming year.

The only other possible source of increase to the fund is from the operation of a provision in the act establishing navy hospitals, approved February 26, 1811, the second section of which directs "that all fines imposed on navy officers, seamen, and marines, shall be paid to the commissioners of navy hospitals." On careful inquiry, I cannot learn that any such disposition has ever been made of these moneys. Without doubt by far the largest portion is irrecoverably lost; but, with the hope of reclaiming even a small portion, I have caused the subject to be brought to the notice of the proper officers of the Treasury, who are now engaged in its investigation. With the most favorable results, so little can be expected from this source, that it may be practically disregarded.

The support of naval hospitals thus depends, and for the future must continue to depend, on the income accruing within the year to the naval-hospital fund from hospital money and stopped rations of the sick; and hereafter the aggregate of these will not be swollen by transfers made on account of preceding years. Its precise amount therefore is nothing more than the solution of a problem whose factors are all known.

Now, the annual cost of maintaining the hospital department, as far as the same is chargeable to this fund, has for several years past averaged about $130,000. Notwithstanding the exercise of the most rigid economy during the last year, the expenses have fallen but little below this sum, and a less amount cannot well be depended on as sufficient for the future. It is true the outbreak of yellow fever at the navy-yard, Pensacola, entailed unusual burdens on the finances of the Bureau, and has swollen the aggregate of expenditures beyond anticipated limits. Yet such emergencies are liable to arise at any time, and when they occur must be provided for, be the cost what it may.

In consequence of the death from yellow-fever of the two medical officers attached to the yard, and prior to the arrival of those ordered in their places, it became necessary to employ private physicians as well as additional nurses, and hence the commandant of the yard, (himself soon to fall a victim to the disease,) in the exercise of a wise discretion, summoned the most eminent professional talent to his assistance. The expenses of every kind, thus incurred, will amount to nearly $10,000; and yet, small as the sum is, the meager resources of the Bureau are embarrassed in its endeavors to meet it. I mention this significant fact

principally to show how closely ordinary expenses must keep pace with our ordinary income.

In view of the foregoing statement of facts, and of the importance of maintaining the medical department on a proper footing, I respectfully urge upon you the necessity which exists of applying to Congress for a special appropriation to the naval-hospital fund.

To make good deficiencies and carry on with efficiency the hospital-service for the remainder of the present fiscal year, $50,000 will be required, and for the fiscal year ending June 30, 1876, $100,000.

NAVAL HOSPITALS.

During the twelve months now closing, nothing further has been attempted than to keep these establishments as nearly as possible in the condition they were in at the last report. In spite of every effort, their deterioration is rapidly increasing, and they are now in need of repairs largely beyond our means to effect. The buildings within and without require painting and general renovation, while the grounds and cemeteries attached to them present a most neglected appearance. The sum of $25,000, asked for in the estimates of the Bureau, is barely sufficient to preserve the former from decay; and this done, but little remains for the necessary care and improvement of the surroundings. For years past this amount was regularly appropriated for "repairs and improvements," but at the last session, from motives of economy, it was cut down to $5,000; a sum so entirely inadequate that it merely serves to execute the most indispensable repairs to buildings, without leaving a dollar to spare for other purposes. This will be obvious from the consideration that seven spacious hospitals, and two smaller ones, with a large building used for a laboratory, in addition to grounds, cemeteries, &c., have to be kept in good order out of an amount no greater than that appropriated for the purchase of bunting for the Navy.

Suitable accommodations for the sick are imperatively needed at the Pensacola station. The present wooden building standing in the center of the navy-yard, besides being ill adapted to hospital purposes, is a source of infection to the houses around, and its destruction as soon as the approach of cold weather permits cannot be avoided, although not the slightest provision for the care of the sick will then remain. While I am clearly of the opinion that a permanent and substantial structure should be erected in its stead, and that in the end it would be the most economical, I refrain from urging it on account of the heavy outlay required, the valuable time consumed in its erection, and the necessity which presses upon us of preparing hospital accommodation as speedily as possible after the removal of the present building.

I therefore recommend that a hospital more or less temporary in character be constructed during the winter, on or close to the site of the old hospital, near the Barrancas, which has the reputation of being a healthy situation, is easy of access, and is incapable of diffusing infection through the navy-yard or the adjacent towns. The cost of such a building will be about $30,000, for which an appropriation will be required.

I beg to renew the recommendation made in the last annual report, that an appropriation of $50,800 be asked of Congress, for the construction of surgeon's quarters, drains, roads, water-pipes, &c., at the naval hospital, Mare Island, Cal. As these improvements have long been needed and would greatly conduce to the efficiency of the estab-

lishment, the propriety of soon commencing them is commended to your favorable consideration.

The want of libraries for the use of the sick at our naval hospitals is greatly to be regretted, but owing to insufficiency of means could never be obviated save in the most imperfect manner. Some of the hospitals are entirely without these indispensable comforts for the sick, and those best off in this respect possess but a handful of half-worn books, for which they have been indebted to private liberality and occasional charity. Surely a state of things like this reflects no credit on the Navy, and should not be allowed to continue a moment longer than is absolutely necessary. A special appropriation in this case is not contemplated; but should an increase of the hospital fund be allowed, it is my intention, with your approbation, to apply as much of it as can be spared from more pressing wants to this much-needed and humane object.

YELLOW-FEVER EPIDEMIC AT PENSACOLA, FLA.

During the recent prevalence of yellow fever at the Pensacola navy-yard, two medical officers, I regret to say, fell victims to its ravages, viz, Surgeon John B. Ackley and Acting Passed Assistant Surgeon George B. Todd, while a third medical officer, subsequently ordered there, experienced soon after his arrival an attack of the disease.

Doctors Ackley and Todd were officers of high professional attainments and general intelligence. They fell in the heroic discharge of duty, leaving behind them an example that sheds luster on the branch of the service to which they belonged.

SURGEONS' NECESSARIES AND APPLIANCES.

By the naval appropriation bill for 1874–'75, the amount allotted for "surgeons' necessaries and appliances" was reduced from $40,000 to $30,000. As the latter sum is found to be entirely inadequate for the medical and surgical wants of the Navy, in the estimates for the next fiscal year I have recommended that the appropriation be restored to the first-named amount, which, for many years, was the regular appropriation, and had never been found more than sufficient for the purpose.

The irregularly-recurring demands of the service compel the laboratory to keep on hand a considerable stock of medicines and instruments for any emergency that may arise, and for this reason the appropriation for one year has to be partially expended in laying up a stock of articles for issue in the next. In consequence of the large number of vessels fitted out during the Spanish excitement last autumn, an unexpected burthen of $20,000 devolved upon the Bureau, no portion of which has since been refunded, as was done by special act in the case of other bureaus similarly circumstanced. Owing to this cause the present fiscal year found the Bureau with its supplies materially diminished, and without the means of replenishing them. Under these circumstances it considers its request, for the restoration of the appropriation to its original amount of $40,000, nothing more than reasonable.

NAVAL MEDICAL SCHOOL.

I again respectfully solicit your favorable consideration of the project of providing higher medical instructions for assistant surgeons. As my views on the subject were expressed at considerable length in the

last annual report of the Bureau, it is not deemed necessary to repeat them here. I will only add that, on mature reflection, I am more than ever convinced of the great need of something in the nature of an organized system, by which practical instruction, not otherwise within their reach, except at great personal expense, may be secured for this class of young officers.

The object now proposed is not to establish an academy analogous to that at Annapolis for the education of midshipmen and engineers, but to provide at some central point, on a moderate scale, the requisite facilities for completing the professional training of assistants in such branches as practical anatomy and surgery, the use of the microscope, &c., and the performance of chemical operations as far as applicable to medicine. Most of the young medical men who come before our naval board for examination possess the merest theoretical knowledge on these branches, a practical acquaintance with which is universally recognized as of the greatest value to the physician.

A comparatively small sum would purchase all the microscopes, surgical instruments, chemical apparatus, anatomical material, books, &c., necessary for the use of the school. As the instruction is designed to be given by medical officers already in the Navy, and as far as practicable by those discharging other duties, there would be no additional expense on this score.

BUREAU PUBLICATIONS.

An intelligent and experienced medical officer of the Navy, for the last two years, in the intervals of other duties, and with but little extraneous assistance, has been sedulously employed under the supervision of the Bureau in the examination of hundreds of medical journals from hospitals and ships, with a view to the collection of the numerous cases of surgical injuries they were known to contain. A most extensive body of facts, replete with scientific value and of the greatest interest to the profession, is the result of this investigation. I am gratified to announce that the work of arranging and classifying these cases has been prosecuted with so much diligence that a volume of considerable size is now in manuscript, and will be ready for the hands of the printer early in the coming year.

Thus far the enterprise has been carried on without other aid than that afforded by our own resources, but unless pecuniary assistance is obtained to defray the cost of publication, this valuable record of naval medical experience cannot be given to the world. To publish it in a durable form $30,000 will be required, and I respectfully ask that Congress be appealed to for the necessary appropriation.

Very respectfully, your obedient servant,

J. BEALE,
Surgeon-General United States Navy.

Hon. GEORGE M. ROBESON,
Secretary of the Navy.

A.—*Statement of sick, compiled from reports of sick from the naval stations in the United States, and from vessels in commission on home and foreign stations, for the year ending December* 31, 1873.

Hospitals.	Remaining sick December 31, 1872.	Admitted in 1873.	Discharged in 1873.	Died in 1873.	Total treated in 1873.	Remaining sick December 31, 1873.	Percentage of deaths to whole number of cases treated.
Chelsea, Mass	22	129	120	6	151	25	.....
Brooklyn, N. Y	62	335	303	17	403	83	.....
Philadelphia, Pa	43	217	220	14	260	26	.....
Annapolis, Md	6	20	22	1	26	3	.....
Washington, D. C	16	118	113	5	134	16	.....
Norfolk, Va	32	118	127	5	150	18	.....
Pensacola, Fla	6	25	28	.....	31	3	.....
Mare Island, Cal	44	112	93	9	156	54	.....
Yokohama, Japan	6	84	85	2	90	3	.....
Total	243	1,158	1,111	59	1,401	231	.04

Yards and stations.	Remaining sick December 31, 1872.	Admitted in 1873.	Discharged in 1873.	Died in 1873.	Total treated in 1873.	Remaining sick December 31, 1873.	Percentage of deaths to whole number of cases treated.
Portsmouth, N. H	3	208	203	3	211	5	.....
Boston, Mass	6	245	247	4	231	.....	.....
Brooklyn, N. Y	10	241	240	.....	251	11	.....
Philadelphia, Pa	4	180	180	.....	184	4	.....
Washington, D. C	7	445	438	1	452	13	.....
Norfolk, Va	4	174	177	1	178	.....	.....
Pensacola, Fla	.....	6	6	.....	6	.....	.....
Mound City, Ill	1	13	14	.....	14	.....	.....
Mare Island, Cal	4	125	117	.....	129	12	.....
League Island, Pa	1	36	36	1	37	.....	.....
Torpedo station	.....	51	48	.....	51	3	.....
Naval Academy	10	1,013	1,002	1	1,023	10	.....
Total	50	2,737	2,718	11	2,787	58	.004

Receiving-ships.	Average number on board in 1873.	Remaining sick December 31, 1872.	Admitted in 1873.	Discharged in 1873.	Died in 1873.	Total treated in 1873.	Remaining sick December 31, 1873.	Percentage of deaths to whole number of cases treated.
Portsmouth, N. H	116	1	76	76	.....	77	1	.....
Boston, Mass	400	3	105	98	1	108	9	.....
Brooklyn, N. Y	836	18	440	427	.....	458	31	.....
Philadelphia, Pa	116	6	114	106	.....	120	14	.....
Norfolk, Va	136	2	57	59	.....	59	.....	.....
Mare Island, Cal	131	.....	53	48	2	53	3	.....
Total	1,735	30	845	814	3	875	58	.003

RECAPITULATION.

	Aggregate number of officers and men on board vessels in 1873.	Remaining sick December 31, 1872.	Admitted in 1873.	Discharged in 1873.	Died in 1873.	Total treated in 1873.	Remaining sick December 31, 1873.	Percentage of cases to number of persons on board.	Percentage of deaths to number of persons on board.	Percentage of deaths to number of persons treated.
Hospitals	.....	243	1, 158	1, 111	59	1, 401	231	.....	.....	.04
Navy-yards and stations	.....	50	2, 737	2, 718	11	2, 787	58	.....	.....	.004
Receiving-ships	1, 737	30	845	814	3	875	58	.50	.002	.003
Vessels in commission at sea	12, 723	255	8, 582	8, 460	55	8, 837	32	.70	.004	.006
Total	14, 460	578	13, 322	13, 103	128	13, 900	669	.96	.008	.009

Summary of vessels in commission.

Aggregate number on board during the year 1873	12, 723
Remaining sick December 31, 1872	255
Admitted in 1873	8, 582
Discharged in 1873	8, 460
Died in 1873	55
Total treated in 1873	8, 837
Remaining sick December 31, 1873	322
Percentage of cases to whole number of persons on board	.70
Percentage of deaths to whole number of persons on board	.004
Percentage of deaths to number of persons treated	.006

At the close of the year 1872 there remained under treatment 578 cases; during the year 1873 there occurred 13,322 cases of disease, injury, &c., making a total of 13,900 cases treated during the year, of which number 128 died, 13,103 were returned to duty or discharged the service, leaving 669 cases under treatment at the close of the year 1873.

The average strength of the Navy (officers, seamen, marines, engineer service, and coast survey included) for the year 1873, as near as can be ascertained, was about 14,460.

The percentage of cases admitted, to the whole number of persons in the service, was about .96, or each person was on the sick-list $\frac{96}{100}$ of a time during the year. The percentage of deaths to the whole number of persons in the service was .008, and the percentage of deaths to the whole number of cases treated was 009.

The total number of deaths from all causes reported at the Navy Department from October 1, 1873, to September 30, 1874, was 146.

APPENDIX B.

Summary of prevalent forms of disease on home and foreign service for the year ending December 31, 1873.

	North Atlantic.		South Atlantic.		European.		Pacific.		Asiatic.		Special service.		School and practice.		Coast survey.		Total.	
Aggregate number of men	3,794		824		1,071		2,154		2,389		1,384		175		32		12,723	
	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.
Class I.—Zymotic diseases:																		
Order I.—Miasmatic diseases:																		
Catarrhus epidemicus	3	.....	.....	.....	.....	.....	1	.....	6	.....	.....	.....	.....	.....	.....	.....	10	.....
Cholera epidemica	.....	.....	.....	.....	.....	.....	.....	.....	6	2	.....	.....	.....	.....	.....	.....	6	2
Cynanche parotidea	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....
Erysipelas	.....	.....	1	1	1	.....	3	1	4	.....	4	.....	.....	.....	.....	.....	13	2
Febris cerebro-spinalis	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Febris continua simplex	35	.....	26	.....	26	.....	4	.....	19	.....	5	.....	.....	.....	1	.....	116	.....
Febris enterica	1	.....	3	.....	1	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	α	.....
Febris flava	26	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26	3
Febris intermittens	169	2	21	.....	65	.....	226	.....	172	1	86	.....	.....	.....	.....	.....	739	3
Febris remittens	181	.....	5	.....	1	.....	62	1	11	.....	9	.....	.....	.....	.....	.....	269	1
Morbilli	.....	.....	1	1	.....	.....	.....	.....	.....	.....	4	.....	4	.....	.....	.....	9	1
Vaccinia	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Variola	.....	.....	.....	.....	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....
Order II.—Enthetic diseases:																		
Syphilis primitiva	55	.....	11	1	103	.....	83	.....	108	.....	35	.....	1	.....	3	.....	399	1
Syphilis consecutiva	29	.....	8	.....	25	.....	32	.....	90	.....	11	.....	1	.....	.....	.....	196	.....
Gonorrhœa	12	1	14	.....	33	.....	67	.....	72	.....	20	.....	1	.....	6	.....	225	1
Ophthalmia gonorrhœica	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Order III.—Dietic diseases:																		
Alcoholismus	2	.....	.....	.....	1	.....	7	.....	6	.....	3	.....	.....	.....	.....	.....	19	.....
Delirium tremens	14	2	11	.....	7	.....	11	.....	12	1	8	.....	.....	.....	.....	.....	63	3
Ebriositas	1	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
Class II.—Constitutional diseases:																		
Order I.—Diathetic diseases:																		
Adynamia	38	.....	4	.....	19	.....	24	.....	21	.....	3	.....	3	.....	.....	.....	112	.....
Anæmia	9	.....	3	.....	5	.....	12	.....	5	.....	5	.....	.....	.....	.....	.....	39	.....
Anasarca	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Carcinoma	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Pleurodynia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	1	.....	4	.....

APPENDIX B.

Summary of prevalent forms of disease on home and foreign service for the year ending December 31, 1873—Continued.

	North Atlantic.		South Atlantic.		European.		Pacific.		Asiatic.		Special service.		School and practice.		Coast survey.		Total.	
	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.
Class II.—Constitutional diseases—Continued.																		
Order I.—Diathetic diseases—Continued.																		
Podagra	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
Rheumatismus acutus	47	.....	31	.....	52	.....	50	.....	60	.....	14	.....	1	.....	.....	.....	255	.....
Rheumatismus chronicus	75	.....	21	.....	54	.....	57	.....	85	.....	43	.....	.....	.....	.....	.....	335	.....
Order II.—Developmental diseases:																		
Senectus	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....
Order III.—Tubercular diseases:																		
Scrofula	2	.....	.....	.....	7	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	10	.....
Tuberculosis	.....	.....	.....	.....	6	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	8	.....
Class III.—Parasitic diseases:																		
Vermes	1	.....	1	.....	3	.....	.....	.....	6	.....	2	.....	.....	.....	.....	.....	13	.....
Class IV.—Local diseases:																		
Order I.—Diseases of the nervous system:																		
Apoplexia	2	.....	1	1	.....	.....	1	.....	2	.....	2	1	.....	.....	.....	.....	8	2
Cephalalgia	25	.....	10	.....	6	.....	14	.....	18	.....	5	.....	.....	.....	.....	.....	78	.....
Cerebritis	3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	4	.....
Chorea	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Dementia	9	.....	.....	.....	4	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	15	1
Epilepsia	16	.....	3	.....	13	.....	12	.....	5	1	10	.....	.....	.....	.....	.....	59	1
Insolatio	4	.....	.....	.....	.....	.....	7	.....	3	.....	.....	.....	.....	.....	.....	.....	14	.....
Irritatio spinalis	.....	.....	.....	.....	2	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....
Mania	.....	.....	1	.....	2	.....	3	1	.....	.....	1	.....	.....	.....	.....	.....	7	1
Melancholia	2	.....	.....	.....	.....	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....	5	.....
Neuralgia	35	.....	23	.....	24	1	36	.....	29	.....	15	.....	.....	.....	2	.....	164	1
Nostalgia	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....
Paralysis	1	.....	1	.....	1	.....	3	.....	2	.....	8	1	.....	.....	.....	.....	16	1
Order II.—Diseases of the eye:																		
Amaurosis	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
Conjunctivitis	15	.....	9	.....	14	.....	13	.....	13	.....	11	.....	.....	.....	.....	.....	75	.....
Hemeralopia	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Herpes corneæ	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....
Iritis	4	.....	1	.....	1	.....	3	.....	6	.....	1	.....	.....	.....	.....	.....	16	.....
Ophthalmia	5	.....	1	.....	3	.....	5	.....	7	.....	2	.....	.....	.....	.....	.....	23	.....

Retinitis	1												2								3			
Ulcus corneæ													1								1			
Order III.—Diseases of the ear:																								
Otalgia									2												2			
Otitis	2		5		4		6		6		4										27			
Otorrhœa	1								1		4										6			
Surditas	1																				1			
Order IV.—Diseases of the teeth:																								
Odontalgia			1				2														3			
Order V.—Diseases of the circulatory system:																								
Aneurysma							4	1													4	1		
Angina pectoris	1				3	1			2		1										7	1		
Endocarditis	4				2		4														10			
Hypertrophia cordis	1				1		2	1	5	1	1										10	2		
Morbi valvularum cordis	1																				1			
Palpitatio	7		5		16		13		7		1										49			
Pericarditis					1						1										2			
Phlebitis							1				1										2			
Syncope									1	1											1	1		
Varix	9				1		1		3												14			
Order VI.—Diseases of the respiratory system:																								
Asthma							9		6		1										16			
Bronchitis acuta	117		10		22		38		25		46						1				259			
Bronchitis chronica	17		1		7		8		15		6										54			
Catarrhus	42		81		69		86		74		14		4								370			
Epistaxis	1																				1			
Hæmoptysis	1				1		1		3		4										10			
Hydrothorax	5																				5			
Laryngitis	1		2		2		9	1	5		2										21	1		
Parotitis									1		1										2			
Phthisis pneumonica acuta					1																1			
Phthisis pneumonica chronica	11		1		26	3	7		7	1	4										56	4		
Pleuritis	20		9		5	1	9		19		7		1								70	1		
Pneumonia	14	2	3	1	7	1	3				4										31	4		
Order VII.—Diseases of the digestive system:																								
Cholera morbus	15				3	1	9		6		2		7								42	1		
Cirrhosis hepatis					5				1												6			
Colica	13		22				16		34		13										98			
Constipatio	16		16		28		14		11		2										87			
Diarrhœa acuta	97		28		9		77		240		55										506			
Diarrhœa chronica	2		21		69		9		30	1	1		2								134	1		
Dysenteria acuta	47		18		1		33		40		11		1								151			
Dysenteria chronica	4		2		3				5		4										18			
Dyspepsia	34		17				22		27		4										104			
Enteritis	1				4		2	1	1												8	1		
Fistula in ano	8						3		3												14			
Gastritis	6				1		11				1										19			
Hæmatemesis	1				1		1				1	1									4	1		
Hæmorrhois	9		3		1		10		7		6										36			
Hepatitis acuta	4		2		5	1	3		2		4										20	1		
Hepatitis chronica			1		4	1	3				1										9	1		
Icterus	7		2		1		3		3		2										18			

APPENDIX B.

Summary of prevalent forms of disease on home and foreign service for the year ending December 31, 1873—Continued.

	North Atlantic.		South Atlantic.		European.		Pacific.		Asiatic.		Special service.		School and practice.		Coast survey.		Total.	
	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.	Cases treated.	Deaths.
Class IV.—Local diseases—Continued.																		
Order VII.—Diseases of the digestive system—Cont'd.																		
Peritonitis					13		1		4		1						19	
Pharyngitis	3						1		1		1						6	
Prolapsus ani	6								1								7	
Sea-sickness									3								3	
Splenitis	1				1												2	
Stomatitis			1				3				1						5	
Tonsillitis	34		19		22		35		26		21		1				158	
Ulcus recti													1				1	
Order VIII.—Diseases of the urinary and genital system:																		
Albuminuria							2				1						3	
Balanitis	1																1	
Calculus							1										1	
Cystitis	1		2		4		5		5		1						18	
Diabetes											3						3	
Dysuria	2						1										3	
Hæmaturia			1		3												4	
Hydrocele					6		2		1								9	
Ischuria	1																1	
Nephritis	3				2				1								6	
Orchitis	11		12		37		14		41		8						123	
Paraphymosis	1		1		4				2		1						9	
Phymosis	1								1								2	
Enuresis			1		1		7		1		1						11	
Fistula vesicæ							1										1	
Urethræ strictura	21		1				6		5		7						45	
Varicocele	1				2						1						2	
Order IX.—Diseases of the locomotive system:																		
Arthritis	1								3								4	

Ankylosis					1				1				2							
Caries											2									
Coxalgia									1											
Hydrops articulorum	1						1		1											
Necrosis					1		1													
Ostitis									1											
Periostitis	1		2		1		1				3									
Synovitis	7		1		1		12		5		3									
Order X.—Diseases of the integumentary system:																				
Abscessus	62		33		47		79		56		27		2							
Adenitis	9		9		23		42		47		13									
Anthrax	5		1		2		9		2		2		1							
Ecthyma							3		1											
Eczema	6		3		3		3		4											
Erythema							1													
Furunculus	58		16		55		80		65		22		2							
Herpes	1		3				5		2		1									
Impetigo	2								1											
Lichen	23				10		21		16		9		2							
Pernio	1		1				1													
Porrigo					1		1													
Prurigo					1				2											
Psoriasis			1		3		1		1		1									
Rupia							1				3									
Unguis involutis									3											
Ulcus	23		14		18		18		29		9									
Urticaria											1									
Class V.—Non-malignant tumors and cysts:																				
Adenoma	1								2											
Enchondroma	1																			
Sarcome					1															
Tumor			8		2		3		3		1									
Class VI.—Violent diseases and deaths:																				
Order I.—Wounds, injuries, and accidents:																				
Abrasio	14		9		9		14		15		4									
Ambustio	16		8		11		17		9		1				1					
Concussio cerebri			1		2	1	4		6		1	1								2
Contusio	161		36		49		109		61		45		19		1					
Fractura	17		12		12	1	17	1	13		10									2
Hernia	24		4		15		2		5				1							
Luxatio	38		28		20		32		25		6									
Stremma	20		4		25		8		17											
Submersio					2	2	2	1	3	2										5
Vulnus contusum	76		44		34		47		74		27		7							
Vulnus incisum	27		20		26		34		18		14		1		2					
Vulnus laceratum	11		5		19		18		15				7							
Vulnus punctum	23		5		5		16		8		4		3		1					
Vulnus sclopetarium	3						3	1					1							
Total	2065	10	767	5	1286	14	1867	11	1972	11	789	4	73		18				8837	55

APPENDIX C.

Naval-hospital fund.

The condition of this fund is represented as follows:	
Balance on hand October 1, 1873	$18,663 35
Transferred to the credit of the fund in settlement of accounts, by the Fourth Auditor, from October 1, 1873, to October 1, 1874	112,470 70
Total	131,134 05
Deduct amount expended from October 1, 1873, to October 1, 1874	129,540 20
Balance on hand October 1, 1874	1,593 85

APPENDIX D.

Insane of the Navy.

On the 30th September, 1873, there remained under treatment in the Government Hospital for the Insane, near this city: 3 officers; 1 late ensign; 7 seamen; 1 late seaman; 1 ordinary seaman, extra; 1 late ordinary seaman; 4 landsmen; 1 coal-heaver; 1 late first-class boy; 10 marines, and 2 beneficiaries. Total	32
Admitted during the year ending September 30, 1874: 2 officers; 1 late boatswain's mate; 7 seamen; 3 seaman extra; 4 ordinary seamen; 2 ordinary seamen, extra; 1 late ordinary seamen; 8 landsmen; 1 marine; 1 beneficiary, and 1 first-class boy. Total	31
Total number under treatment during the year	63
The discharges in the course of the year were:	
By recovery: 1 officer; 2 seamen; 1 seaman, extra; 3 landsmen; 1 marine; 1 ordinary seaman, extra, and 1 first-class boy. Total	10
By death: 1 late seaman; 1 late first-class boy, and 1 late ordinary seaman. Total	3 13
Leaving in the institution on the 30th September, 1874: 4 officers; 1 late ensign; 1 late boatswain's mate; 12 seamen; 2 seamen, extra; 5 ordinary seamen; 2 ordinary seamen, extra; 9 landsmen; 1 coal-heaver; 10 marines, and 3 beneficiaries. Total	50

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876 by the Bureau of Medicine and Surgery.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
SALARIES.		
One clerk of class four, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8)	$1,800 00	.....
One clerk of class three, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8)	1,600 00	.....
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3)	840 00	.....
One laborer, per act of July 12, 1870, (16 Stat. at L., p. 250, sec. 3)	720 00	.....
	4,960 00	$4,960 00
CONTINGENT EXPENSES.		
Stationery and miscellaneous items	400 00	400 00
SURGEONS' NECESSARIES AND APPLIANCES.		
For the support of the medical department; for surgeon's necessaries; for vessels in commission, navy-yards, naval stations, Marine Corps, and Coast Survey, (appropriated June 6, 1874)	40,000 00	50,000 00

Estimates of appropriations required for the service of the fiscal year, &c.—Continued.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
REPAIRS AND IMPROVEMENTS OF HOSPITALS.		
For repairs to naval laboratory, naval hospitals and appendages, including roads wharves, outhouses, sidewalks, fences, gardens, farms, cemeteries, steam heating-apparatus, furniture, head-marks for graves in cemeteries, &c., (appropriated June 6, 1874)	$25,000 00	$5,000 00
CIVIL ESTABLISHMENT.		
For civil establishment at the several naval hospitals and naval laboratory, (appropriated June 6, 1874)	40,000 00	39,161 00
CONTINGENT.		
For contingent expenses of the Bureau; for freight on medical stores; transportation of insane patients; advertising; telegraphing; purchase of books; expenses attending the naval medical examining boards; purchase and repair of wagons and harness; purchase of cows and horses, and feed for same; purchase of trees, seeds, garden-tools, and fuel, &c., (appropriated June 1, 1874)	25,000 00	25,000 00

Respectfully submitted.

J. BEALE,
Surgeon-General, United States Navy.

No. 8.

BUREAU OF PROVISIONS AND CLOTHING.

NAVY DEPARTMENT,
BUREAU OF PROVISIONS AND CLOTHING,
Washington, October 13, 1874.

SIR: In accordance with instructions contained in your letter of the 1st instant, I have the honor to submit herewith estimates marked "A," "B," "C," "D," and "E," for the fiscal year ending June 30th, 1876.

The money for the purchase of clothing is considered as a *fund*, (and not as an appropriation,) which, as ten per cent. was added to the cost of all issues, remained, until within the last four years, nearly undiminished. Since the abolition of this percentage, however, the charges for the lost and damaged clothing, for that supplied gratuitously to officers and men to replace articles destroyed by accident, or to prevent the spread of disease; the losses on sales of clothing which had remained so long on hand as to be unfit for issue, and the incidental expenses in the handling of clothing, have so reduced this fund that it is now almost exhausted, and an appropriation is imperatively necessary.

In lieu of the outfit of clothing to seamen recommended by several of my predecessors, I would recommend that a credit of three months' pay be given to each enlisted man when he shall have been shipped three months, which, in my opinion, would be more effectual to prevent desertions than an outfit to each man at the time of his shipment.

To provide the seamen of the Navy with standard articles of clothing and small stores, and insure that uniform appearance which is desirable, it is necessary to ship these articles from the United States, and the cost of this shipment has to be defrayed from the contingent fund.

The Bureau would, therefore, most earnestly urge that the contingent appropriation be increased to $75,000, (the amount appropriated for a number of years prior to last year,) which was found, during the last few years, to be barely sufficient, with the strictest economy, to meet this, the heaviest charge upon it, and other contingent expenses.

I have the honor to be, very respectfully, your obedient servant,

JAS. H. WATMOUGH,
Acting Paymaster General, U. S. N.

Hon. G. M. ROBESON,
Secretary of the Navy, Washington, D. C.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Bureau of Provisions and Clothing.

Detailed objects of expenditure and explanations,	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
A.—EXPENSES OF THE BUREAU OF PROVISIONS AND CLOTHING.		
For salary of chief clerk, per act of July 5, 1862, (12 Stats. at L., p. 511, sec. 3)	$1,800 00	.....
For salary of one clerk of class four, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8)	1,800 00	.....
For salary of three clerks of class three, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8)	4,800 00	.....
For salary of two clerks of class two, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8)	2,800 00	.....
For salary of three clerks of class one, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8)	3,600 00	.....
For salary of one messenger, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3)	840 00	.....
For salary of one laborer, per act of July 12, 1870, (16 Stat. at L., p. 250, sec. 3)	720 00	.....
	16,360 00	$14,760 00
B.—CONTINGENT EXPENSES OF THE BUREAU.		
For blank-books, stationery, and miscellaneous items; (appropriated Stat. at L., pamphlet edition, p. 103, sec. 1)	800 00	800 00
C.—PROVISIONS FOR THE NAVY.		
For provisions for the officers, seamen, and marines, viz, 8,500 men, 900 commissioned officers, and 1,200 marine officers and privates; (appropriated Stat. at L., pamphlet edition, p. 56, sec. 1)	1,465,000 00	.....
For the purchase of water for ships	35,000 00	.....
	1,500,000 00	1,335,000 00
D.—CLOTHING AND CLOTHING MATERIALS FOR THE NAVY.		
For the purchase of clothing and clothing materials; submitted	200,000 00	.....
E.—CONTINGENT EXPENSES OF THE NAVY.		
For freight and transportation to foreign and home stations; for candles; for fuel; for interior alterations and fixtures in inspection buildings; for tools and repairing same at eight inspections; for special watchmen in eight inspections; for books and blanks; for stationery; for telegrams advertising, postages, and express charges; for tolls, ferriages, and car tickets; for ice; and for incidental labor, not chargeable to other appropriations; (Stat. at L., pamphlet edition, p. 56, sec. 1)	75,000 00	50,000 00

JAS. H. WATMOUGH,
Acting Paymaster-General, U. S. Navy.

No. 10.

BUREAU OF STEAM ENGINEERING.

NAVY DEPARTMENT, BUREAU OF STEAM-ENGINEERING,
Washington, November 23, 1874.

SIR: I have the honor respectfully to submit the annual report of the Bureau, with estimates for the several navy-yards, for repairs to the machinery of naval steamers; for the preservation and refitting of machinery of vessels required on cruising stations; and for materials, stores, &c., under cognizance of this Bureau.

MACHINERY, ETC., REPAIRED.

During the year past the machinery, &c., of the following-named vessels has been repaired and refitted for active service. Vessels marked with an asterisk (*) have had new boilers placed on board: Plymouth, second rate,) Blue Light, (tug,) and *Speedwell, (tug,) at the Kittery navy-yard; Franklin, (first rate,) new auxiliary boilers, and *Brooklyn, (second rate,) at the Charlestown navy-yard; Colorado, (first rate,) Florida, (first rate,) Minnesota, (first rate,) Kansas, (third rate,) Dictator, (iron-clad,) Roanoke, (iron-clad,) and Catalpa, (tug,) at the Brooklyn navy-yard; Canandaigua (second rate) and Ajax, (iron-clad,) at the Philadelphia navy-yard; *Shawmut (third rate) and Mayflower, (tug,) at the Washington navy-yard; Pensacola, (second rate,) Saranac, (second rate,) and Naragansett, (third rate,) at the Mare Island navy-yard; *Catskill, (iron-clad,) at the Continental Iron Works, Green Point, N. Y; *Montauk, (iron-clad,) at the Quintard Iron Works, N. Y.; iron-clads *Jason, *Nahant, *Passaic, and Wyandotte, at the Delaware River Iron and Ship-Building Works, Chester, Pa.; and the iron-clads Canonicus and *Lehigh, at the works of the Harlon & Hollingsworth Co., Wilmington, Del.

In addition to the above, the machinery, &c., of the vessels which rendezvoused at Key West during the last summer were more or less repaired at that station, as required, which necessitated the employment of a considerable number of mechanics, the most of whom were brought from New York for that purpose.

NEW MACHINERY, ETC.

Of the 50″ by 42″ engine converted into compound engines, one pair has been completed and erected on board the Swatara, at the Brooklyn navy-yard, and satisfactory results were obtained from the trials at the dock, and during its performance at sea while the vessel was steaming to Kerguelen Island with the scientific party sent out to observe the transit of Venus. Reports were forwarded from Bahia, Brazil, and Cape Town, Africa. Of the remainder, one pair is in process of erection on board the Marion, at Portsmouth navy-yard; one pair is being erected in the Vandalia, at Charlestown navy-yard, (nearly completed,) and one pair is ready for erection on the Quinnebaug, at Philadelphia navy-yard. The compound engines for the Galena, at Norfolk navy-yard, and for Mohican, at the Mare Island navy-yard, are being pushed toward completion as rapidly as practicable.

The machinery of the United States steamer Tennessee has been completed during the year and dock-trials made. The performance was such as to promise satisfactory results when the final trial-tests are made at

sea. The condition of the vessel prevented these final practical tests at sea (provided by the contract) being made upon the completion of the machinery.

The machinery, &c., under contract for the eight sloops-of-war is either ready, or nearly ready, for erection on board the respective vessels, and some of it is now being forwarded to the navy-yards where it is to be erected. It is expected that these engines will be completed within the next three months; some of it probably at an earlier date.

The compound machinery under contract for the Nipsic at the Washington navy-yard is completed as far as possible before being erected in the vessel, and has been delivered at the yard.

The engine and boilers for the tug Monterey are completed and in progress of shipment to Mare Island. New boilers for the Monocacy on the Asiatic station have been completed and shipped in sections to Japan, to be erected on board that vessel there, and boilers for the Ashuelot and Palos are nearly ready for shipment to that station; this course having been found to be by far the most economical, owing to the unskilled and high-priced labor charged for work of the character required in the engineering department of United States naval vessels on that station.

MACHINERY OF VESSELS, ETC., UNDER REPAIR.

The machinery, &c., of the following-named vessels is now undergoing thorough repair; those marked with an asterisk (*) are to have new boilers: *Cohassett (tug) and *Leyden (tug) at the Boston navy-yard; Tallapoosa, (4th rate,) *Wyoming, (3d rate,) and *Triana, (tug,) at the Washington navy-yard; *Rose (tug) at the Pensacola navy-yard; *Monadnock, (iron-clad,) Camanche, (iron-clad,) and *Iroquois, (3d rate,) at the Mare Island navy-yard; *Amphitrite, (iron-clad), at the works of the Harlon & Hollingsworth Co., Wilmington, Del.; *Nantucket (3d rate) at the works of Cramp & Sons, Philadelphia, Pa.; and the *Miantinomah (iron-clad) at the Delaware River Iron & Ship-Building Works, Chester, Pa. New boilers are also constructing for the tugs Pinta and Mayflower. Such of the boilers stored in the navy-yards, constructed for vessels not completed, as can be utilized will be used for vessels fitting out, to which they may be adapted as required.

Old boilers removed from the Dacotah and California have been repaired and put on board the Kearsarge and Pensacola. The two remaining boilers from the California will probably be used in the Iroquois.

COMPARATIVE TEST OF ENGINES OF ORDINARY AND OF COMPOUND TYPE.

A recent trial at the Boston navy-yard of engines of the simple and of the compound type has just been completed under the supervision of Chief Engineer C. H. Loring, United States Navy, and Mr. Charles E. Emery, consulting engineer for the United States revenue marine, the report of which is appended herewith, marked A.

PRESERVATION OF BOILERS.

The rapid decay of boilers used in connection with surface condensers having become a question of grave consideration, many experiments have been made with a view of arresting this decay by corrosion. None of the methods heretofore tested, except in a single instance, resulted

successfully, except to a very limited and partial extent. The apparatus for arresting and neutralizing the acids in the water supplying the boilers from surface condensers, and preventing their introduction in the boilers, referred to in my last annual report, has given gratifying results on all the vessels where it has been thoroughly tested.

SCREW-PROPELLERS.

The inefficiency of the two-bladed screws, owing to insufficient areas of blades, continues to be reported. These screws were substituted by the Department, several years since, in place of those of four blades then used, with a view to decreasing the resistance of the propeller while the vessel was under sail alone.

As the screw-ports of these vessels were designed for screws of four blades, they would not admit of one of a less number having the same area; consequently, in every one of the many cases where the two-bladed screw was substituted, the vessel was so crippled for want of sufficient propelling area, that it was almost impossible to steam three miles an hour against an ordinary head wind, using full engine-power. In some cases the original four-bladed screws have been replaced, and the efficiency of such vessels brought up to their original standard.

With a view to determining exactly what the relative losses were when dragging the screw held stationary, or when allowed to revolve freely by pressure of the water, and also to determine the exact law governing the losses of the screw-propeller in fraction of the pitch used, a full and elaborate set of experiments were made at the Mare Island navy-yard, the results of which are herewith appended, marked B.

FIREMEN.

In my last annual report, attention was called to the condition of this part of the engineer force on shipboard. I would now further state that with the exception of the men on the paddle-wheel steamers and iron-clads in commission, there are practically no *firemen* in the service. Their duties are performed by seamen, part of whom are shipped for the performance of this particular duty, but the larger portion are detailed from the men on deck, as emergency requires. These men are unskilled in the performance of this duty, to which they are unaccustomed, and, in many cases, regard being detailed to perform it a punishment, causing dissatisfaction and many desertions, and resulting at least in inefficient firing, and consequent waste of fuel.

PERSONNEL OF THE ENGINEER CORPS.

The last report of this Bureau called your attention to the large and rapidly increasing number of vacancies in the list of assistant engineers, and the difficulty of securing competent persons to fill them. During the three years ending December 31, 1873, forty-eight vacancies occurred by death, resignation, dismissal, and retirements. During this period only eleven appointments were made to the grade, although it is believed that every applicant who seemed at all suitable has received permission to be examined for that grade. In the year 1873, while seventeen vacancies occurred, only two of the candidates for admission were found to possess the necessary qualifications, and during the current year but one candidate from civil life has thus far been recommended for appointment. As the number of engineer graduates from

the Naval Academy must, (while the number of cadets remains limited as at present,) at most, be small, and insufficient to fill the vacancies as they occur from time to time, I respectfully recommend that the number of cadets appointed to the academy be increased to such a number as will secure not less than fifteen graduates per annum.

Congress at its last session very wisely increased the duration of the engineering course for these cadets from two years to four. The course of instruction, restricted by the brief term of the old system to the salient points of mechanical engineering, can now be developed so as to take in the more recondite details of the profession. Some things still remain to be desired, among which may be urged instruction in shipbuilding, for the reason that a knowledge of its calculations must be considered a necessary prerequisite to the sound designing of marine-engines. The course at present given to the cadet-midshipmen in the department of seamanship is most excellent, and, with the addition of lectures upon the practical details of iron-ship construction, would be of infinite benefit to the cadet-engineers.

It can hardly be out of place here to advert to the subject of physical culture, and to urge its paramount importance for cadet-engineers, whose professional duties at sea often make such demands upon their bodily endurance as to prematurely break down and retire from active service many promising officers. The retired and sick lists of the corps exhibit this most prominently. For these students, whose specific practical exercises are of an engrossing and confining nature, out-of-door drills are especially desirable, if not absolutely required, to develop their physique. Indeed, it appears that all the practical drills and exercises given to the cadet-midshipmen, except only in seamanship, would tend to make the cadet-engineers more useful in their service after graduation.

Greenland coal.

Specimens of the coal brought from the Waigat Straits, on the north side of Disco Island, Greenland, by Commander D. L. Braine, U. S. N., commanding United States steamship Juniata in 1873, have, through the kindness of Prof. Benjamin N. Martin, of the New York University, been carefully analyzed. This coal is from a formation of very different age from that which furnishes our ordinary coal; abounds in impressions of peculiar plants; and, as a matter of scientific interest, specimens of this coal were forwarded for analysis. Appended herewith are the papers relating to this subject, marked C.

Estimates.

The estimates for the next fiscal year, for salaries, for purchase of oil, stores, tools, &c., and for pay of mechanics and laborers employed in the engineering departments of the several navy-yards, are herewith submitted, marked D and E.

Very respectfully, your obedient servant,

WM. W. W. WOOD,
Chief of Bureau.

Hon. GEO M. ROBESON,
Secretary of the Navy.

A.

Report of the trials of the steam-machinery of the United States revenue-steamers Rush, Dexter, and Dallas, at the United States navy-yard, Boston, Mass., in the month of August, 1874, by a joint board of United States naval and United States revenue-marine engineers.

In the early part of the present season there were completed, for the United States revenue-marine, three new revenue-steamers, named, respectively, in honor of ex-Secretaries of the Treasury, the Rush, the Dexter, and the Dallas. The three vessels are similar as respects the hulls, the screws, and the boilers, but the engines are different each from the other: that of the Rush being a compound engine; that of the Dexter, a high-pressure condensing-engine; and that of the Dallas, a low-pressure condensing-engine.

The vessels are each 140 feet long over all, 129½ feet between perpendiculars at water-line, 23 feet extreme breadth of beam, and 10 feet depth of hold. The draught of water aft is about 8 feet 10 inches. The hulls are of wood. The vessels represent the smallest type of full-powered screw revenue-cutters adapted for cruising-purposes. They were all intended to be rigged as schooners; but it having been decided to send the Rush to the Pacific coast, she was rigged as a top-sail schooner. One of the vessels averaged upward of eleven nautical miles per hour for six consecutive hours on her trial-trip, and neither of them averaged less than 10 knots; the machinery being entirely new in each case.

Each vessel has one boiler, 11 feet wide on base and 9 feet high, with a double segmental shell, each portion being 6 feet 2 inches in diameter. There are three furnaces in each boiler, located between water-legs attached to the bottom of the shell. The products of combustion return through tubes within the shell. The boiler of the Dallas, designed for low-pressure steam, is 13 feet 9 inches long, the front connection being built in and the steam-chimney attached to the boiler. The boilers of the two other vessels were designed for high-pressure steam, and are each 12 feet long, independent of front connection, which is a separate structure bolted on. The steam-chimney is also a separate structure, connected to boiler by a large tube. The boiler of the Dallas has 160 tubes, 3¼ inches in diameter and 9 feet 3 inches long. The boilers of the two other vessels have each 158 tubes, 3¼ inches in diameter and 9 feet 8 inches long.

The Rush is propelled by a compound engine with vertical cylinders and intermediate receiver, arranged fore and aft at the same level, the pistons being separately connected to cranks at right angles.

The cylinders are thoroughly steam-jacketed, felted, and lagged, and are respectively 24 and 38 inches in diameter, with 27 inches stroke of piston. The steam is distributed to the high-pressure cylinder by a short slide-valve, with adjustable cut-off plates sliding on back of same. The distribution of steam to the low-pressure cylinder is effected by means of a double-ported slide-valve, with lap proportioned to cut off the steam at about half-stroke. The surface-condenser is arranged on the starboard side. It supports two main columns from the cylinders, and contains 900 square feet of condensing surface. The air-pump is operated from the cross-head of the low-pressure engine. The circulating-pump is of the centrifugal type, operated by a small engine directly connected. The screw is 8 feet 9 inches in diameter, with mean pitch of 14½ feet. The engine was intended to be operated regularly with a steam-pressure of 80 pounds, but during the trials, hereafter referred to, it was reduced to correspond to the pressure carried on trial of Dexter. The machinery was designed by Charles E. Emery, consulting engineer, and built by the Atlantic Works, East Boston, Mass., the contractors for the vessel complete.

The Dexter was also built under contract with the Atlantic Works, East Boston, Mass. The engine of this vessel is built from designs of that establishment, and is of the inverted type, with a single cylinder, 26 inches in diameter and 36 inches stroke of piston. The cylinder is not jacketed, but is carefully felted and lagged. Steam is distributed by a short slide-valve, with adjustable cut-off plates sliding on back of same. The condenser is located outside the frame, but it and the air and circulating pumps are exact duplicates of those in the Rush. The engine and boiler are designed to be operated with a maximum steam-pressure of 70 pounds.

The Dallas was built under contract with the Portland Machine Works, of Portland, Me. The engine was designed in that establishment, and is of the inverted type, with a single cylinder, 36 inches in diameter, with 30 inches stroke of piston. The cylinder is not steam-jacketed, but is carefully covered with non-conducting composition, and lagged. Steam is distributed by a short slide-valve, with adjustable cut-off plates sliding on back of same. The surface-condenser is located under starboard frames, and has the same condensing-surface as those in the other vessels. The air and circulating pumps are also substantially the same. The engine and boiler are designed to be operated with a maximum steam-pressure of 40 pounds.

The opportunity presented of testing in these vessels the relative merits of the three kinds of engines attracted considerable attention. Several manufacturers and engi-

neers expressed a desire that competitive trials be made. A correspondence on the subject was opened between the Navy and Treasury Departments, which resulted in an agreement for a trial, under the direction of persons representing both services, and the undersigned, Chief Engineer Charles H. Loring, U. S. N., and Charles E. Emery, consulting engineer, were selected in behalf of the Navy and Treasury Departments, respectively, to make preparations for and take general charge of the trials.

When the preparations were complete, the following officers were detailed to conduct the experiments, viz: Chief Engineer Edward Farmer, U. S. N.; Chief Engineer George D. Emmons, U. S. N.; Chief Engineer J. H. Pulsifer, U. S. R. M.; and Chief Engineer J. A. D. Bremon, U. S. R. M.

As assistants to these gentlemen, there were detailed Passed Assistant Engineers Harvey and Cook, U. S. N.; Assistant Engineer Tobin, U. S. N.; and Mr. E. Hugentobler. The care of the machinery was intrusted to the engineer of the respective vessels. The chief engineers detailed for the experiments stood regular watches with an assistant while the experiments were in progress, and at the close certified duplicate copies of the logs, which are deposited in the Navy and Treasury Departments, respectively. They also computed the principal results for their own satisfaction, and returned to their regular duties; but two of the assistants were retained to assist the undersigned in making out a statement in detail, which is presented in the annexed tables.

MANNER OF MAKING THE EXPERIMENTS.

The experiments were made with the vessels secured to the wharf.

The coal, which was anthracite, of fair quality, was broken on the wharf to proper size, (the vessels' bunkers having been closed and sealed,) and filled into bags to a certain weight. The bags were sent on board when ordered by the senior engineer on watch, he making record on the log of the number of bags and the time of receipt, a similar record being made by one of the men on the wharf. At the end of the hour, the number of bags of coal actually put on the fire was reported from the fire-room and entered in the appropriate column. The several records agreed with each other, and the total amount expended corresponded with the total number of bags filled on wharf. The ashes were measured into buckets (of which the mean weight was ascertained) and tallied as they were hoisted out. They were afterward weighed in gross on the wharf, and the two accounts found to agree substantially.

The feed-water was measured after its delivery from the surface-condenser and before its return to the boiler, for which purpose a tank of boiler-plate was especially constructed, having a plate dividing it vertically into two equal parts. In the upper edge of the plate was cut a rectangular notch eight inches long, by which the height to which each half of the tank could be filled was determined. The mean of the weight of water which the half-tank contained was 1,129½ pounds, at a temperature of 72 degrees Fahrenheit.

In the computations for each experiment, the weight of water is reduced to correspond with mean temperature.

One of the feed-pumps was disconnected from the check feed-valve, and its discharge-pipe led to a small receiving-tank placed over the two halves of the measuring-tank, into which this pump forced the condensed water from the hot-well. The receiving-tank had on its bottom two cocks, one over each half-tank, so that either could be filled from it at will. The other feed-pump had its suction-pipe detached from the hot-well, and connected with the bottoms of the two half-tanks through a cock on each, so that the contents of either could be drawn out and discharged into the boiler.

The method of measuring the water and recording it was as follows: One side having been filled, the cock over it on the receiving-tank was closed and the other over the empty half opened. When the water in the full one had settled to the height of the edge of the notch, its cock in the feed-pipe was opened and the contents pumped into the boiler, (care being taken to empty one in less time than it required to fill the other.) When empty, its feed-cock was closed. When the water in the tank being filled reached within a few inches of the notch, a gong in engine-room was sounded to call attention, and when it reached the notch the gong was struck twice; at this instant the assistant engineer in the engine-room noted the reading of the counter, and an attendant in the fire-room noted and reported the height of water in the glass gauge on boiler, as shown by a scale of inches secured to it. The attendant at the tank also noted the time of filling and the temperature when the tank was half emptied. After entering the number of the counter in the log, the assistant engineer ascertained the numerical difference between that and the preceding entry, and, if it was far from the average, its cause was sought for.

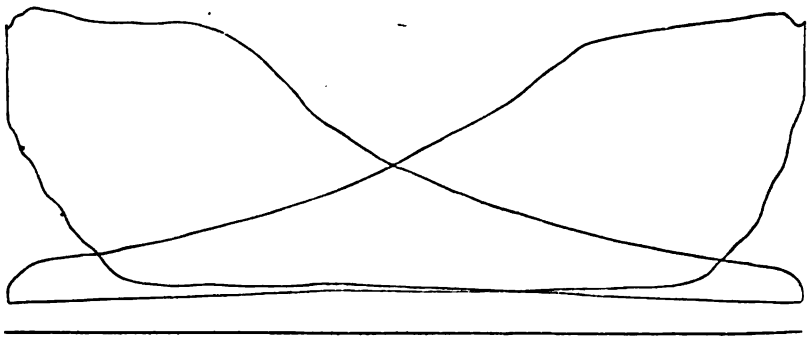
By this system of checks all errors of record could be detected, and it was possible to preserve and utilize any continuous run which came to an end through derangement of the engine. All parts of the tanks, pipes, and cocks were plainly visible to the eye; and had any leaks occurred therein, they must have been detected. That the con-

INDICATOR DIAGRAMS.

U. S. REVENUE-STEAMER "RUSH."

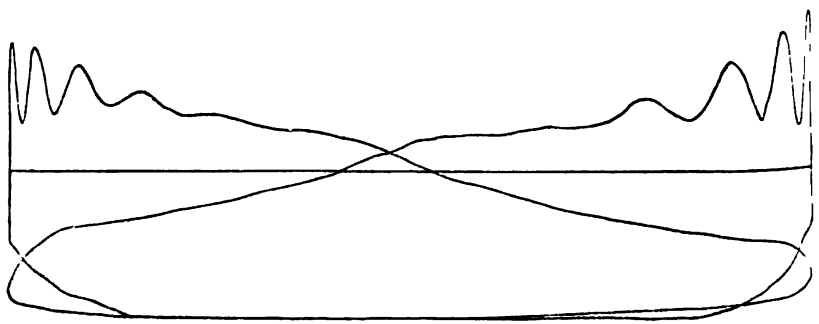
High-Pressure Cylinder.

Scale of indicator, 40 pounds per inch.



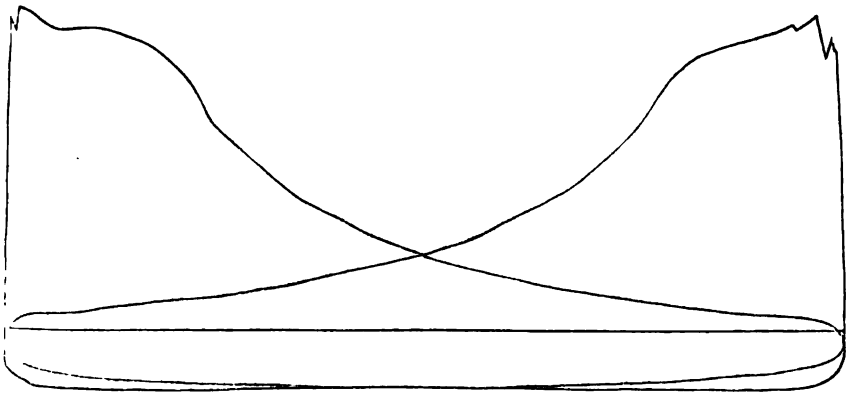
Low-Pressure Cylinder.

Scale of indicator, 16 pounds per inch.



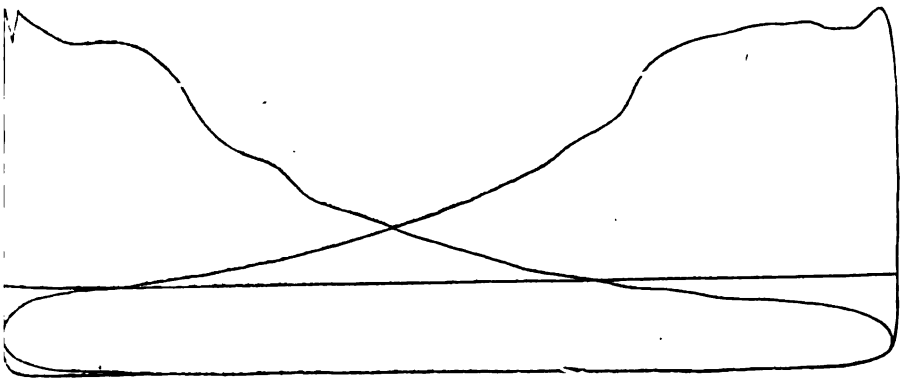
U. S. REVENUE-STEAMER "DEXTER."

Scale of indicator, 40 pounds per inch.



U. S. REVENUE-STEAMER "DALLAS."

Scale of indicator, 24 pounds per inch.



B.

Experiments made at the Mare Island navy-yard, California, with different screws applied to the United States steam-launch No. 4, to ascertain their relative propelling efficiency.

During the time the writer was chief engineer of the Mare Island navy-yard, he made the experiments hereinafter described with the different screws applied by him to the United States steam-launch No. 4, attached to that yard. These experiments were promptly authorized, on the application of the writer, by Admiral Porter, then at the head of the Navy Department, without whose liberal support they could not have been made.

The machinery of the launch, designed by Mr. William R. Eckhart, the superintendent of machinery at the navy-yard and formerly an engineer in the Navy, was completed in the autumn of 1869, before the arrival of the writer. In the conduct of the experiments, all of which were projected and made by the writer in person, Mr. Eckhart rendered most valuable assistance.

The principal objects of the experiments were to ascertain, 1st. The relative economic propelling efficiency of screws of the same diameter, uniform pitch, and number of blades, but of different fractions of the pitch. 2d. The relative economic propelling efficiency of two-bladed, four-bladed, and Mangin screws, having the same diameter, uniform pitch, and fraction of pitch; in other words, having the same quantity and kind of surface. 3d. The relative economic propelling efficiency of a screw of the same diameter as the others, and having the same fraction of pitch as one of them, but three blades and a greater pitch expanding from the forward to the after edge of the blades. 4th. The relative economic propelling efficiency of this three-bladed screw, converted into a Griffith screw.

To ascertain the foregoing facts, there were to be determined for each screw and for different speeds of vessel with the same screw, the gross-effective indicated horse-power developed by the engines; the pressure per square inch of pistons required to work the engines *per se*, or disconnected from the screw; the resistance of the vessel *per se*, by dynamometer; the speed of the vessel; the slip of the screws, and the friction of their respective surfaces on the water. These quantities enable the distribution of the whole power exerted to be accurately computed, and the values of the parts applied to produce the different effects ascertained.

Incidentally to the experiments, the economic vaporization of the boiler with anthracite was ascertained; and the power exerted by the engines to give the three-bladed screw a certain number of revolutions per minute, with the vessel held stationary to the wharf.

Before narrating the experiments, it is necessary to give the following description and dimensions of the hull and machinery employed:

HULL.

The hull is of wood. Its submerged surface is not coppered, but was kept well painted and cleaned during the experiments. With the vessel at the below draught of water, (at which the experiments were made,) the top of the rail at the bow is 6 feet above the water-line; at the center of the vessel's length, 3 feet 3 inches; and at the stern, 4 feet 3 inches. There is a house on the deck, 6 feet 8 inches wide, 38 feet 9 inches long, and rising, as a mean, 3 feet 9 inches above the top of the rail. The rudder is of metal and counterbalanced:

Length on load water-line, from forward edge of rabbet of stem to after side of sternpost		54.40 feet.
Extreme breadth on load water-line		11.88 feet.
Depth of hull, from load water-line to lower edge of rabbet of keel.	Forward	2.457 feet.
	Mean	3.156 feet.
	Aft	3.855 feet.
Depth of the keel below the lower edge of its rabbet.	Forward	0.500 foot.
	Mean	0.729 foot.
	Aft	0.958 foot.
Load-draught of water from the bottom of the keel.	Forward	2.957 feet.
	Mean	3.885 feet.
	Aft	4.813 feet.
Area of the greatest immersed transverse section at load-draught		24.98 square feet.
Area of the load water-line		456.54 square feet.
Area of the immersed external surface of the hull proper, exclusive of keel and rudder		603. square feet.
Area of the immersed external surface of the hull, inclusive of keel (100.8 square feet) and rudder (132 square feet)		717. square feet.

Displacement, per inch of draught, at load water-line	38.045 cubic feet.
Displacement, per inch of draught, at load water-line	1.0891 ton.
Displacement, to load water-line	814.100 cubic feet.
Displacement, to load water-line	23.3053 tons.
Distance of the greatest transverse section abaft the middle of the length of the load water-line	3.42 feet.
Height of the meta center above the center of displacement	4.93 feet.
Depth of the center of displacement below the load water-line	1.09 feet.
Center of displacement abaft the middle of the length of the load water-line	2.26 feet.
Angle of dead-rise at the greatest transverse section	13½ degrees.
Ratio of the area of the greatest immersed transverse section to the area of its circumscribing parallelogram	0.6663
Ratio of the area of the load water-line to the area of its circumscribing parallelogram	0.7064
Ratio of the displacement to its circumscribing parallelopipedon	0.3991
Ratio of the length of the hull on the load water-line to its breadth	4.5791

In the following table will be found the areas of the greatest immersed transverse sections, areas of water-lines, displacements, and angles at bow and stern, for different water-lines; commencing at the load water-line previously given, and descending by vertical depths of 6 inches. These water-lines, it must be observed, are parallel to the load water-line corresponding to the vessel's draught of water, forward and aft, previously given:

Number of water-line.	Depth, in feet, from lower edge of rabbet of keel to water-line.		Area of greatest immersed transverse section, from lower edge of rabbet of keel to water-line, in square feet.	Area of water-line, in square feet.	Displacement, from lower edge of rabbet of keel to water-line, in cubic feet.	Angles of water-lines.	
	Forward.	Aft.				Bow.	Stern.
						°	°
7	2.457	3.855	24.98	456.54	814.100	38	77
6	1.957	3.355	19.04	421.26	593.915	37	56½
5	1.457	2.855	13.26	370.86	395.360	34½	48
4	0.957	2.355	7.93	294.71	228.025	30	35
3	0.457	1.855	3.62	188.16	105.980	19½	22½
2		1.355	1.25	81.90	20.090	8	11½
1		0.855	0.35	26.04	15.470	4½	3½

From the following dimensions the form of the immersed solid of the hull can be ascertained. They are ordinates to the curves of the water-lines formed by the outside of the planking, and are given in feet from the forward and aft center line of the hull. That line is divided into sixteen equal parts of 3.4 feet each, and the corresponding transverse sections are numbered from 1 at the stem to 17 at the stern; from each point of division a right-angled ordinate is erected on which the dimensions referred to apply.

The water-lines are 6 inches apart, measured vertically. They are not parallel to the rabbet of the keel, but to the surface of the water when the vessel has the draught of water forward and aft as given above. Water-line A is at the water-level, water-line B is 6 inches below A and parallel to it, and so on.

Water-lines 6 inches apart vertically, a being at the water-level.	Ordinates, in feet, from the central forward and aft line of the hull to the outside of the planking on each transverse section of the immersed solid of the hull, as numbered below, No. 1 being at the stem and No. 17 at the stern. Distance of the transverse sections apart, 3.4 feet.																
	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.	No. 10.	No. 11.	No. 12.	No. 13.	No. 14.	No. 15.	No. 16.	No. 17.
A	0.12	0.72	1.79	2.94	4.02	4.88	5.45	5.76	5.90	5.94	5.90	5.78	5.50	5.08	4.25	2.68	0.30
B	0.12	0.57	1.41	2.50	3.58	4.50	5.24	5.66	5.84	5.90	5.84	5.66	5.26	4.60	3.42	1.75	0.12
C	0.12	0.40	1.06	2.00	3.01	4.00	4.75	5.25	5.54	5.61	5.52	5.22	4.63	3.76	2.47	1.03	0.12
D	0.12	0.25	0.67	1.36	2.18	3.04	3.85	4.50	4.91	5.00	4.82	4.31	3.54	2.60	1.56	0.62	0.12
E	0.12	0.18	0.39	0.75	1.28	1.85	2.44	2.92	3.25	3.34	3.20	2.78	2.20	1.51	0.90	0.42	0.12
F	0.12	0.16	0.24	0.35	0.50	0.68	0.90	1.14	1.40	1.50	1.42	1.25	0.98	0.70	0.46	0.28	0.12
G	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.14	0.21	0.34	0.45	0.48	0.46	0.33	0.30	0.22	0.14	0.12
H	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.14	0.14	0.13	0.12
I	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12

ENGINES.

There are two direct-acting, non-condensing engines. The cylinders are vertical, and are placed immediately above the crank-shaft, with their connecting-rods working downward. The cylinders rest upon columns supported in turn upon a cast-iron bed-plate, which contains the crank-shaft journals. The valve-chests of the cylinders are placed between the cylinders back to back. There are two small slide-valves to each cylinder, one at each end, connected in the chest by rods. These valves work with the full pressure of the steam upon their backs, and receive their movement direct from two eccentrics and a Stephenson link. They have no lap on the exhaust side, but sufficient steam-lap to cut off the steam at 0.858 of the stroke of the piston from the commencement when in full gear. In this state the steam is released when the piston has completed 0.96 of its stroke, and the cushioning commences at 0.94 of the stroke. The Stephenson link is connected directly to the head of the valve-stem.

The cranks for the after cylinder are forged in the crank-shaft. For the forward-cylinder there is but one crank; it was forged separately and keyed on, and its pin is overhung. The crank-shaft has three journals, one for the forward cylinder, and two for the after cylinder. The thrust-collars are forged on the crank-shaft, and their pillow-block is supported on the engines' bed-plate.

There are no collars on the screw or line shafting.

The feed-pump is worked direct from an eccentric on the crank-shaft between the engines. This pump is slightly inclined, is single-acting, and the eccentric-rod is articulated to the bottom of the pump-plunger.

The feed-water is fresh, and is carried in a tank; before it enters the boiler, it is passed through a heater supported on the top of the boiler, and has its temperature raised to about 125° Fahrenheit by the exhaust-steam. This heater consists of an outer and inner pipe, placed concentrically; the exhaust-steam being within the inner pipe and the feed-water being in the annular space between the two pipes.

The exhaust-steam after passing through the heater is thrown into the chimney of the boiler, and accelerates its draught.

The sides of the cylinders are felted and lagged, also all the steam-pipes.

The following are the principal dimensions of the engines, namely:

Number of cylinders	2.
Diameter of cylinders	6¼ inches.
Diameter of piston-rod	1½ inches.
Stroke of pistons	8 inches.
Net area of both pistons, exclusive of piston-rods	70.574 square inches.
Space displacement of both pistons, exclusive of piston-rods	564.592 cubic inches.
Clearance of the pistons	$\frac{3}{16}$ inch.
Length of steam-port	4 inches.
Breadth of steam-port	⅝ inch.
Area of steam-port	2½ square inches.
Length of exhaust-port	4 inches.
Breadth of exhaust-port	⅞ inch.
Area of exhaust-port	3½ square inches.
Space comprised in the clearances and passages of one end of both cylinders	26.4 cubic inches.
Number of crank-shaft journals	3.
Diameter of crank-shaft journals	2½ inches.
Length of crank-shaft journals	3½ inches.
Diameter of crank-pin journals	2 inches.
Length of crank-pin journals	2 inches.
Diameter of cross-head journals	1½ inches.
Length of cross-head journals	1½ inches.
Area of main guide-gib	18.28 square inches
Diameter of main connecting-rod in the necks	$1\frac{3}{16}$ & $1\frac{5}{16}$ inches.
Length of main connecting-rod between centers of journals	19 inches.
Diameter of feed-pump, (single-acting plunger)	2½ inches.
Stroke of feed-pump plunger	2½ inches.
Width of eccentric-straps	¾ inch.
Length, forward and aft the vessel, occupied by the engines	36 inches.
Breadth, athwartship, occupied by the engines	27 inches.
Height of the engines above axis of crank-shaft	42 inches.
Number of thrust-collars on screw-shaft	5.
Projection of thrust-collars beyond screw-shaft	$\frac{1}{16}$ inch.
Thickness of thrust-collars on screw-shaft	¼ inch.
Heating surface in feed-water heater	260 square inches.
Net weight of engines, including crank-shaft, but excluding everything else	1,400 pounds

BOILER.

There is one boiler of the horizontal fire-tube type, with the tubes returned by the sides of the furnace.

The shell is a horizontal cylinder of 49 inches outside diameter, and 6 feet 6 inches extreme length, with flat ends. The front end is the front tube-plate for the tubes, and the uptake is of sheet-iron, made separately, and bolted to the front of the shell.

There is one furnace, and it is contained in a cylinder of 2 feet inner diameter, and 4 feet 11¼ inches extreme length. In this cylinder are the grate-bars and the bridge-wall. The grate-bars are 4 feet 3 inches long, and the average breadth of the grate-surface is 1.96 feet.

The top of the grate-bars, at the front of the furnace, is one foot below the furnace-crown; and, at the back of the furnace, 1 foot 4 inches below this crown; the breadth of each grate-bar is $\frac{9}{16}$ inch, and the width of the air-spaces between them is ⅝ inch. The least water-space between the furnace and the shell is at the bottom of the latter, and is 3 inches wide, including thicknesses of metal.

The opening for the furnace-door is a semicircle of 20 inches radius. The door is of wrought iron, hinged at the bottom and latched at the top. It has a perforated lining-plate for the distribution of air, and two registers for the admission of air above the incandescent fuel. The aggregate air-opening in the two registers is 13.5 square inches.

The bridge-wall is an iron casting faced with brick. Its top is 6 inches above the top of the grate-bars, and its width is 5 inches. The height from the crown of the furnace to the top of the bridge-wall is 10 inches.

The back smoke-connection has a flat top, a flat back, and a flat front. The sides and bottom are concentric with the boiler-shell, from which they are separated by a water-space 3 inches wide, including thicknesses of metal. The flat water-space between the back of the connection and the end of the shell is 3 inches wide, including thicknesses of metal. The extreme height of the connection in the clear is 29½ inches. The front of the connection is the back tube-plate of the tubes.

The tubes are returned along each side of the furnace, the top of the upper row being 3½ inches above the furnace-crown. The tubes are of iron, lap-welded. Six of them are 2½ inches in outside diameter, and the remaining fifty-four are 2 inches in outside diameter. Their metal is $\frac{1}{16}$ of an inch in thickness. The tubes of each row, horizontally, are placed opposite the spaces between the tubes of the row, above and below. The least water-space between the tubes is ⅝ of an inch in the clear. The tube-plates are of ½-inch thick metal, and the length of the tubes in the clear of the plates is 4 feet 10¼ inches.

The uptake is a construction of sheet-iron separate from the boiler-shell, and bolted to it. The outer periphery is concentric with the boiler-shell, and the inner periphery is concentric with the furnace. The front projects over the fire-room 4⅝ inches at the bottom and 13 inches at the top. On this inclined surface are two uptake-doors opposite the tubes. They are hinged at the top and latched at the bottom, and are of sufficient area to embrace all the tubes. From the top of the uptake, (at the level of the top of the boiler-shell,) which is rectangular in horizontal section, the chimney is drawn in to a circle of 10½ inches inner diameter at the height of 20 inches above the top of the shell. At this height the upper cylindrical part, 4 feet 6 inches high, is hinged on. The chimney, for the whole height above the top of the shell, is surrounded by an air-jacket of 14½ inches outside diameter, perforated with a row of holes at top and bottom.

Immediately over the boiler-shell, and connected to it by a pipe of 8 inches diameter, is a boiler-plate cylinder with flat ends serving for steam-room additional to what the upper part of the shell contains. The inner diameter of this cylinder is 15 inches, and its inner length is 4 feet 11¼ inches. It is of ⅝-inch thick iron, and its upper part contains a dry-pipe, of 3 inches diameter, extending its whole length and perforated along the upper side. The steam-pipe to the engines is an extension of this dry-pipe. The hole in the top of the boiler-shell within the 8 inches diameter pipe is 4 inches diameter, and through it the steam passes to the cylindrical steam-room from the shell. The space between the top of the boiler-shell and the bottom of the cylinder is 3¼ inches.

The cylindrical portion of the shell is of ⅝-inch thick iron. Its flat ends, and the flat back of the smoke-connection, are of ½-inch thick plate. All seams are double riveted.

In the front of the shell, opening into the uptake, is an elliptical man-hole with diameters of 11 and 14 inches. And in the lower portion of this front, beneath the uptake, are two elliptical hand-holes, with diameters of 2½ and 5 inches.

The entire exterior of the boiler-shell is felted, lagged, and covered with sheet-iron.

The following are the principal dimensions and proportions of the boiler:

Diameter of the shell	4 feet 1 inch.
Length of the shell proper	6 feet 6 inches.

Total length of the boiler, including uptake	7 feet 7 inches.
Number of furnaces	1
Breadth of grate-surface	1.96 foot.
Length of grate-bars	4 feet 3 inches.
Area of grate-surface	8.33 square feet.
Total number of tubes	60
Outside diameter of six of the above tubes	2¼ inches.
Outside diameter of fifty-four of the above tubes	2 inches.
Length of all the above tubes, in clear of tube-plates	4 feet 10¼ inches.
Diameter of the chimney	10¼ inches.
Height of the chimney above the level of the grate-bars	14 feet 9 inches.
Water-room in the shell, up to 4 inches above tubes	36.7303 cubic feet.
Steam-room in the shell, above 4 inches above tubes	11.9404 cubic feet.
Steam-room in the additional cylinder and connecting-pipe	6.1493 cubic feet.
Total steam-room	18.0897 cubic feet.
Cross area for draught over the bridge-wall	1.2370 square feet.
Cross area for draught through the tubes	1.0918 square feet.
Cross area of the chimney	0.6013 square feet.
Heating-surface in the furnace	16.6736 square feet.
Heating-surface in the back smoke-connection	25.2137 square feet.
Heating-surface in the tubes, calculated for their inner circumference	140.3494 square feet.
Heating-surface in the uptake	3.4290 square feet.
Total water-heating surface	185.6657 square feet.
Steam-superheating surface in the uptake	2.5153 square feet.
Ratio of the water-heating to the grate surface	22.289 to 1.000
Ratio of the steam-superheating to the grate surface	0.266 to 1.000
Ratio of the grate-surface to the cross area over the bridge-wall	6.734 to 1.000
Ratio of the grate-surface to the cross area through the tubes	7.630 to 1.000
Ratio of the grate-surface to the cross area of the chimney	13.853 to 1.000
Weight of the boiler, including grate-bars, bearers, chimney, and all doors and plates	5,050 pounds.
Weight of water in the boiler	2,290 pounds.

SPACE OCCUPIED IN THE VESSEL BY THE MACHINERY, AND ITS WEIGHT.

The length in the vessel occupied by the machinery, including the fire-room, feed-water tanks, and coal-bunker, is 19 feet 8 inches. The feed-water tanks are placed along each side of the engines and boiler, so that the entire breadth of the vessel is occupied by the machinery and its appendages. The coal-bunker is forward of the boiler.

The weights of the machinery are as follows, namely:

	Pounds.	
Net weight of the engines proper, including crank-shaft, but excluding piping, flooring, &c	1,400	
Weight of the stern-bearing pipe in dead-wood, and the dead-wood stuffing-box	141	
Weight of the line-shafting and its couplings	590	
Weight of the screw-propeller	250	
Weight of all the piping	150	
Weight of the boiler, including grate-bars, bearers, chimney, and all doors and plates	5,050	
Weight of the water in the boiler	2,290	
Weight of the felt, lagging, gum, putty, and paint on the engines and boiler	129	
Total weight of machinery		10,000
Weight of feed-water carried in tanks	8,500	
Weight of feed-water tanks	3,200	
Weight of coal carried in bunker	4,500	
Weight of coal-bunker	600	
Total weight of feed-water and its tanks, and of coal and its bunker		16,800
Total weight of all objects in the engineer department		26,800

or 12 tons.

SCREWS.

The different screws employed in these experiments are of brass, and will be designated by letters. They are all of the same diameter, and have the same diameter of hub, except the Griffith screw H.

Screws A, C, E and F, were formed in the following manner: Two true screws were very carefully swept up in the sand by the same moulder from the same iron guides, and were cast of the same metal at the same time. Each of these screws has two blades, one opposite the other, and is 5½ inches long in the direction of its axis. The pitch is uniform, and, by accurate measurement of the screws after they were cast, 5.136 feet. If the blades are viewed in projection on a plane parallel to the axis, their forward and after edges are parallel to each other and at right angles to the axis. The outboard end of the screw-shaft was made to receive both screws at the same time, one being placed immediately in front of the other and touching, so that by bringing the after edge of the blades of the forward screw to coincide with the forward edge of the blades of the after screw, the propelling surfaces of both screws would be continuous, and they would thus form one two-bladed screw A, 11 inches long in the direction of the axis. Or, the blades of the after screw could be placed immediately behind those of the forward screw, in the direction of the axis, and they would thus form the Mangin screw F, 11 inches long in the direction of the axis. Or, the blades of the forward screw could be placed at right angles to those of the after screw, and thus form the four-bladed screw E, 5½ inches long in the direction of the axis; for the fact that the blades of the after screw are recessed, as it were, 5½ inches back of those of the forward screw, does not affect the results in the slightest degree, and the screw was the same as though the four blades had been on the same hub of 5½ inches length. Or, one of the screws could be used alone, when it was the two-bladed screw C, 5½ inches long in the direction of the axis.

After the completion of the experiments with the screws formed as above described, one of them was cut through at right angles to the axis, so as to leave it 3½ inches long in the direction of the axis and make the two-bladed screw D.

By using screw D in connection with screw C, bringing their propelling surfaces to be continuous, the two-bladed screw B was formed 8⅝ inches long in the direction of the axis.

It will thus be seen that all the screws from A to F, both inclusive, are composed of exactly the same physical surface, governed by the same co-efficient of friction on the water, and have exactly the same helicoidal form; the results from them are, therefore, free from the doubt which attends trials of screws having different physical surfaces, and, consequently, possibly different helicoidal forms, and different co-efficients of friction, though intended to be exactly the same.

Screw G is a three-bladed screw, with a pitch expanding gradually from 6 feet 6 inches at the forward edge of the blades, to 7 feet 6 inches at the after edge, making the mean pitch 7 feet, which it had by close measurement. The length of the blades, in the direction of the axis, at the periphery of the screw, is 7 inches; gradually increasing thence to 11 inches length, in the direction of the axis, at the radius of 19 inches; from which point it gradually decreases to 6 inches length, in the direction of the axis, at the hub. When the blades are viewed in projection on a plane parallel to the axis of the screw, their forward edge is nearly perpendicular to the axis. If the most forward part of this edge is made to touch this perpendicular, the contact will be at 19 inches radius, from which point the forward edge of the blade curves gradually back until it is, at the hub and at the periphery, 1⅝ inch from the perpendicular. The thickness of the blade just above the fillet joining it to the hub, is 1¼ inch at the center. The weight of the screw is 250 pounds.

Screw H is a three-bladed Griffith screw, formed by trimming the blades of screw G into the Griffith shape, and bolting between them a hub made of wood, to the figure of the frustum of a sphere 15 inches in diameter and 11 inches in height. This hub was well smoothed, painted, and varnished; its diameter is 0.28846 of the diameter of the screw, and both ends are flat and circular. The length of the blades, in the direction of the axis, at the periphery of the screw, is 3½ inches, whence they curve gradually outward to the length of 11 inches, in the direction of the axis, at the radius of 19 inches, from which point they curve gradually inward to the hub, at which the length is 7¼ inches in the direction of the axis. When the blades are viewed in projection on a plane parallel to the axis of the screw, they are pear-shaped, and the forward and after edges are arranged symmetrically on both sides of a perpendicular to the axis passing through the center of the blades. The pitch expands gradually from 6 feet 8 inches at the forward edge of the blade, to 7 feet 4 inches at the after edge, making the mean pitch 7 feet. The fraction used of the pitch in function of the surface and of the propelling efficiency of the surface is 0.24.

In the following table will be found the principal dimensions of the screws: For screws G and H, the mean pitch only is given, and the slip is always calculated for it. For these screws, too, the length given is the greatest length of the blades in the direction of the axis.

Table containing the principal dimensions of the screws employed in the following experiments.

Designation of the screw.	Diameter, in feet.	Diameter of hub, in feet.	Pitch, in feet.	Number of blades.	Length of each blade in direction of axis, in feet.	Fraction used of the pitch.	Projected area of the blades, on a plane at right angles to axis, in square feet.	Helicoidal area of the blades, in square feet.
A	4.3333	0.50	5.136	2	0.9167	0.3570	5.1950	6.1321
B	4.3333	0.50	5.136	2	0.7187	0.2799	4.0730	4.807[illegible]
C	4.3333	0.50	5.136	2	0.4583	0.1785	2.0975	3.0661
D	4.3333	0.50	5.136	2	0.2604	0.1014	1.4755	1.7417
E	4.3333	0.50	5.136	4	0.4583	0.3570	5.1950	6.1321
F*	4.3333	0.50	5.136	4	0.4583	0.3570	5.1950	6.1321
G	4.3333	0.50	7.000	3	0.9167	0.3446	5.0140	6.[illegible]528
H†	4.3333	1.25	7.000	3	0.9167	0.2034	2.7495	4.[illegible]286

* Mangin screw. † Griffith screw.

MANNER OF MAKING THE EXPERIMENTS.

Before commencing the experiments, a very excellent dynamometer was constructed and applied to the screw-shaft for the purpose of measuring the thrust of the screw. It consisted of a single vertical-lever, stiff enough not to spring under a considerably greater pressure than the screw was capable of giving, bearing by knife-edges of steel against a brass ring free to move on guides in the direction of the screw-shaft, and having a turned recess in which was a loose brass ring carrying *lignum-vitæ* plugs or cylinders projecting beyond both sides of the loose ring; both ends of the plugs are bearing-surfaces, and are flat and at right angles to the grain of the wood. These surfaces were kept flooded with oil during the trials. The knife-edges bore against pieces of steel let into the movable brass ring.

The thrust of the screw was delivered against the *lignum-vitæ* plugs by a brass collar secured upon the screw-shaft abaft the regular thrust-collars. There were no collars on the screw-shaft abaft the dynamometer.

The guides of the movable brass ring carrying the loose ring in which the *lignum-vitæ* plugs were inserted, were two steel pins, one on each side of the shaft, fitting into holes of a little larger diameter bored through lugs cast upon the ring.

An accurately graduated steel spiral spring was attached to the upper end of the lever, which end also carried a pencil that traced the line of pressures continuously on a sheet of paper secured around a horizontal large diameter revolving-drum which received its motion from the screw-shaft through worm-wheels and worms. The lower end of the dynamometer lever, the other end of the spiral spring, and the guides of the movable brass ring, were, of course, attached firmly to the vessel. The ratio of the length of the vessel-arm of the lever to the length of the spring-arm, was 1 to 11. The dynamometer-diagram thus obtained, gave the thrust-pressures for every instant during each run of the vessel.

Two indicators were used: one of them was kept permanently in position on one cylinder, and the other on the other cylinder, during the experiments. Each indicator communicated with both ends of its cylinder, and before use was put in perfect adjustment, and had its spring tested.

A counter was attached to the screw-shaft, and registered the number of its revolutions.

The base for the experiments, or the course passed over by the vessel during each run, was a straight line 8,955 feet long, as given by the very accurate survey of Mare Island. It extended from the northern side of the dry-dock dolphins, or guard piers, to the northern side of the magazine wharf. This base was close under the lee of the high ground of the island, the wind over which was always in the same direction, exactly at right angles to the base; and the water smooth.

During all the trials, the variation in the vessel's draught of water, and in the trim, was very slight. The velocity of the tide varied from nil to three geographical miles per hour.

With each screw eight experiments were made at the speeds, respectively, of 5, 5¼, 6, 6¼, 7, 7¼, 8, and 8¼ geographical miles per hour, as nearly as could be obtained. Each experiment consisted of six runs over the base, three in each direction, and the time of making them was selected when the tide had but little influence. The vessel's speed through the water during each double run was not only ascertained from the ranging marks at the ends of the base, but by means of a mercurial speed-gauge consisting of Berthon's modification of Pitot's tube.

This gauge was composed of a glass tube bent into the U-form; the ends of the tube were open, and the curved portion and a portion of the legs were filled with mercury. The top of each leg communicated by a gum pipe with the bottom of a separate air-chamber, and the top of each chamber communicated by another gum pipe with the upper portion of a brass tube closed at both ends. One of these brass tubes was placed within the other, the inner tube passing a few inches through the ends of the outer one by stuffing-boxes. The upper ends of the brass tubes were inside the vessel, and their lower ends protruded about 6 inches below the bottom of the vessel, 12 inches from the nearest side of the keel, and at about the middle of the vessel's length. The inner tube was the pressure-tube, and its interior received the pressure of the water through a hole of $\frac{1}{17}$ of an inch diameter in its side, a little above its bottom, and in the directly ahead direction of the vessel. The larger tube was the neutral tube, and in its side, a little above its bottom, was a hole of $\frac{1}{17}$ of an inch diameter with its axis at the angle of 41½ degrees from the directly ahead direction. The diameter of the outer brass tube was 1 inch, and of the inner brass tube $\frac{5}{8}$ of an inch. A properly graduated scale being attached to the legs of the glass tube, measured by the difference of the level of the mercury in those legs, the vessel's speed in geographical miles per hour. When the vessel was motionless in still water, the mercury in the two legs stood at the same level. The vessel's speed by this gauge in a calm and at dead high or low water, being frequently compared with its speed at the same time according to the shore-marks, was always found to exactly correspond.

In making the experiments, the vessel, at the intended speed, was brought opposite one end of the base and then run uniformly to the other, being kept in a straight line by an expert steersman. After passing the last end of the base a sufficient distance, the vessel was turned and the run repeated back in the same manner. The throttle-valve was always carried wide open, during the turnings as well as during the runs, and the steam-pressure varied but slightly throughout an experiment, the supply of steam required being always within the capacity of the boiler to furnish.

From the commencement of each run to its end, indicator-diagrams were taken as rapidly as possible from each end of each cylinder. The assistant engineers charged with this duty being very expert, and having the pencils and paper all previously prepared, the diagrams were taken with so little interval of time, that they may be considered continuous. The dynamometer-diagram, taken by another engineer, was continuous from the beginning to the end of the run.

An observer stationed always at the same part of the vessel, gave the signal the instant he was opposite the ranges at the ends of the base; and, at the same moment, two other observers took, one the time to a second, and the other the number on the counter. Thus, the time of making each run, and the number of revolutions made by the screw in that time, were exactly ascertained.

During each run, an observer noted at the end of each half minute the vessel's speed through the water, by the speed-gauge; and at the end of every minute the steam-pressure in the boiler, as given by a spring-gauge. There were also noted during each run, the temperatures of the external atmosphere, of the engine-room, of the feed-water entering the boiler, and of the sea-water: also, the atmospheric pressure as given by an aneroid barometer. Every care was observed in the conduct of the experiments to insure extreme accuracy. Although many of the quantities noted were not necessary to the main purpose of the experiment, yet the results from them are interesting in other points of view.

Explanation of tables 1 to 6, both inclusive, containing the data and results of the experiments made with screws A, B, C, D, E, F, G, and H, to determine their relative economic efficiencies.

In the following tables, numbered 1 to 6, both inclusive, will be found the data and results of all the experiments made with screws A, B, C, D, E, F, G, and H, to determine their relative economic efficiencies when applied to the propulsion of steam-launch No. 4. For facility of reference, the lines containing the quantities are numbered and arranged in groups; and the columns containing the data and results for the different speeds of vessel at which the experiments were made are lettered.

These quantities were obtained, for each screw, in the following manner, namely:

On a straight line, taken for a base, all the experimental speeds of the vessel were laid off by scale as abscissæ, and on ordinates erected from these abscissæ, at right angles to the base, were laid off, by scale, the corresponding experimental slips of the screw. A fair curve was then passed through the ends of these ordinates, dividing them as equally as possible. Finally, there were laid off, by scale on the base, abscissæ representing the speeds of vessel given in line 1 of the table; and from these abscissæ right-angled ordinates were erected until they cut the curve, and on them were measured by scale the distances between the curve and the base, which distances gave the true slips of the screw, as shown in line 2 of the tables, and corresponding to the speeds of vessel shown in line 1. The speeds in line 1 are given in geographical

miles of 6,086 feet per hour, increasing for each column of the tables by one-half a geographical mile per hour, commencing in column *a* with 5.0 geographical miles per hour, and ending in column *h* with 8.5 geographical miles. The slip of the screw is expressed in per centum of its speed; the latter being measured by the product of its pitch and of the number of its revolutions made in a given time. The speed of the vessel in the same terms being deducted from the speed of the screw thus obtained, the remainder, expressed in per centum of the latter, is the quantity on line 2. In screws G and H, having expanding pitches in the direction of their axes, the mean pitch is used in all calculations.

From the quantities on lines 1 and 2, that on line 5 is calculated in the following manner:

Let—

A = speed of vessel in feet per hour, (line 1.)

B = slip of the screw in per centum of its speed, (line 2.)

C = pitch of the screw in feet.

Then—

$$\frac{A-1-B}{C\times 1440} = \text{The number of double strokes of engines' pistons, and of revolutions of the screw, made per minute, given on line 5.}$$

The quantities on lines 6 to 12, both inclusive, grouped under the head of "Distribution of the indicated pressure on the pistons," are obtained from the indicator-diagrams in the following manner:

These diagrams were taken as rapidly as possible by expert assistants from each end of each cylinder; and the average mean pressure from all of them for each experiment ascertained. From this mean pressure and the average experimental number of double strokes of engines' pistons made per minute during the experiment, was calculated the gross effective horses-power developed, during the experiment, by the engines. The distribution of this power, for each experiment, was then determined as follows: taking, for example, the experiment in table No. 1, column *a*, in which the gross effective horses-power developed by the engines, (line 13) was 6.6847:

The pressure required to work the engines and shafting, being, by direct experiment, 2 pounds per square inch of piston, (line 7,) and constant for all speeds, the power thus absorbed is (line 14) 0.6109 horse.

Deducting from the gross effective power of 6.6847 horses developed by the engines, this power of 0.6109 horse, there remains the net power of 6.0738 horses (line 15) applied to the shaft, of which 7½ per centum, or 0.4555 horse, (line 16) is absorbed by the friction of the load.

The power expended in overcoming the cohesive resistance of the water by the screw-blades, calculated in the ratio of the square of the velocity, and for a value of 0.45 pound avoirdupois per square foot of helicoidal surface moving in its helical path with a velocity of 10 feet per second, amounts to 0.3598 horse, (line 17.)

The powers (0.4555 and 0.3598 horse) absorbed by the friction of the load and expended in overcoming the cohesive resistance of the water by the screw-blades, being deducted from the power (6.0738 horses) applied to the shaft, there remains 5.2585 horses-power expended in the slip of the screw and in the propulsion of the hull. And, as the slip of the screw is 7.82 per centum of its speed, (line 2,) the power expended in it is (5.2585×.0782=) 0.4112 horse, (line 18,) leaving (5.2585—0.4112=) 4.8473 horses (line 19,) expended in the propulsion of the simple hull.

The quantity on line 19 is the same as that on line 4, and from it the thrust of the screw in pounds can easily be calculated.

Let—

A = the number of horses-power expended in the propulsion of the simple hull.

B = the speed of the vessel in feet per minute.

Then—

$$\frac{A\times 33000}{B} = \text{the thrust of the screw in pounds.}$$

In this manner the quantity on line 3 is calculated from that on line 4 or line 19 for the speeds of vessel in the different columns of the tables.

The quantities on lines 20, 21, 22, and 23 are simply the per centum which the quantities on lines 16, 17, 18, and 19 are respectively of the quantity on line 15.

The quantities on lines 6 to 12, both inclusive, are calculated, respectively, from the quantities on lines 13 to 19, both inclusive, using the areas of the pistons, and the speed of piston in feet per minute deduced from the quantity on line 5.

During the entire time of each experiment a dynamometer-diagram was taken, and the mean pressure obtained from it and multiplied by the leverage of the instrument is the same as found on line 3. From this pressure the quantity on line 4 is obtained by multiplying it by the speed of the vessel in feet per minute and dividing by 33,000.

The difference between the thrusts of the screws, as given directly by the dynamometer, and indirectly by the indicator, was very small, as will be seen from the fact that

their sum by the dynamometer was 22,142, and by the indicator 22,203, the difference of which is only 0.275 per centum of the larger quantity.

After the experimental thrusts of all the screws in all the experiments were ascertained, both directly by the dynamometer and indirectly by the indicator, as above described, for the experimental speeds of the vessel, the latter were laid off, by scale, on a straight base-line as abscissæ. From these abscissæ right-angled ordinates were erected, on which the corresponding experimental thrusts of the screws were laid off, by scale, and a fair curve passed among their ends so as to equally divide them, leaving as many on one side the curve as on the other. Then there were laid off, by scale, on the base, abscissæ representing the speeds of the vessel given in line 1 of the tables; and from these abscissæ right-angled ordinates were erected until they cut the curve, and on them were measured, by scale, the distances between the curve and the base, which distances gave the true thrusts of the screw, as shown on line 3 of the tables, and corresponding to the speeds of vessel shown on line 1. These thrusts are expressed in pounds avoirdupois.

Table No. 1, containing the results of the experiments made with screws A, E, and F, all having the same diameter, 4½ feet; the same uniform pitch, 5.136 feet; the same fraction of the pitch, 0.3570, and the same quantity and kind of surface, but differing in the number and arrangement of the blades. Screw A has two blades, one directly opposite the other; screw E has four blades, in two pairs, at right angles to each other; and screw F is a Mangin screw, with two pairs of directly opposite blades, one pair immediately behind the other.

No. of line.		a	b	c	d	e	f	g	h
1	Speed of the vessel per hour, in geographical miles of 6,086 feet	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	Slip of the screw, in per centum of its speed	7.82	8.37	8.87	9.40	10.10	11.56	13.33	14.57
3	Thrust of the screw, in pounds, by dynamometer	315.4	368.8	449.9	560.6	707.0	867.1	990.7	1,082.4
4	Horses-power, by dynamometer, applied to the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
5	Double-strokes of engines' pistons, and of revolutions of the screw, made per minute	107.1247	118.5443	130.0306	141.6905	153.7779	167.4820	182.2959	196.5007
	DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.								
6	Mean gross-effective pressure on the pistons, in pounds per square inch	21.8838	25.3212	30.4249	37.3312	46.3393	56.2773	64.1455	70.1537
7	Pressure required to work the engines *per se*, in pounds, per square inch of pistons	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	Net pressure applied to the shaft, in pounds per square inch of pistons	19.8838	23.3212	28.4249	35.3312	44.3393	54.2773	62.1455	68.1537
9	Pressure absorbed by the friction of the load, in pounds per square inch of pistons	1.4913	1.7491	2.1319	2.6498	3.3254	4.0708	4.6609	5.1115
10	Pressure expended in overcoming the cohesive resistance of the water by the screw-blades, in pounds per square inch of pistons	1.1771	1.4436	1.7368	2.0598	2.4298	2.8767	3.4118	3.9665
11	Pressure expended in the slip of the screw, in pounds per square inch of pistons	1.3461	1.6838	2.1773	2.8972	3.8974	5.4712	7.2089	8.6078
12	Pressure expended in the propulsion of the vessel, in pounds per square inch of pistons	15.8693	18.4447	22.3789	27.7244	34.6867	41.8586	46.8639	50.4679
	DISTRIBUTION OF THE ENGINE-POWER.								
	Absolute:								
13	Gross effective horses-power developed by the engines								
14	Horses-power expended in working the engines, *per se*	6.6847	8.5592	11.2803	15.0828	20.3195	26.8764	33.3436	39.3083
15	Net horses-power applied to the shaft	0.6109	0.6761	0.7416	0.8081	0.8770	0.9551	1.0396	1.1206
16	Horses-power absorbed by the friction of the load	6.0738	7.8831	10.5387	14.2747	19.4425	25.9213	32.3040	38.1877
17	Horses-power expended in overcoming the resistance of the water, by the screw-blades	0.4555 0.3598	0.5912 0.4876	0.7904 0.6435	1.0706 0.8326	1.4582 1.0644	1.9441 1.3751	2.4228 1.7732	2.8641 2.2209
18	Horses-power expended in the slip of the screw	0.4112	0.5695	0.8076	1.1711	1.7089	2.6128	3.7468	4.8231
19	Horses-power expended in the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
	Proportional:								
20	Per centum of the net power applied to the shaft, absorbed by the friction of the load	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
21	Per centum of the net power applied to the shaft, expended in overcoming the cohesive resistance of the water, by the screw-blades	5.92	6.19	6.11	5.83	5.48	5.30	5.49	5.82
22	Per centum of the net power applied to the shaft, expended in the slip of the screw	6.77	7.22	7.66	8.20	8.79	10.08	11.60	12.63
23	Per centum of the net power applied to the shaft, expended in the propulsion of the vessel	79.81	79.09	78.73	78.47	78.23	77.12	75.41	74.05

Table No. 2, containing the results of the experiments made with screw B, having the diameter 4½ feet, the uniform pitch 5.136 feet, two blades directly opposite each other, and the fraction of the pitch 0.2799.

No. of line.		a	b	c	d	e	f	g	h
1	Speed of the vessel per hour, in geographical miles of 6,086 feet	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	Slip of the screw, in per centum of its speed	8.74	9.35	9.90	10.49	11.26	12.86	14.81	16.15
3	Thrust of the screw, in pounds, by the dynamometer	315.4	368.8	449.9	560.6	707.0	867.1	990.7	1,082.4
4	Horses-power, by dynamometer, applied to the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9693	24.3612	28.2796
5	Double strokes of engines' pistons, and revolutions of the screw, made per minute	108.2086	119.8272	131.5226	143.4137	155.7867	169.9860	185.4624	200.2043
	DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.								
6	Mean gross-effective pressure on the pistons, in pounds per square inch	21.4659	24.8112	29.8120	36.5831	45.4897	55.2601	62.9728	68.8945
7	Pressure required to work the engines, *per se*, in pounds per square inch of pistons	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	Net pressure applied to the shaft, in pounds per square inch of pistons	19.4659	22.8112	27.8120	34.5831	43.4897	53.2601	60.9728	66.8945
9	Pressure absorbed by the friction of the load, in pounds per square inch of pistons	1.4599	1.7108	2.0859	2.5937	3.2617	3.9945	4.5730	5.0171
10	Pressure expended in overcoming the cohesive resistance of the water by the screw-blades, in pounds per square inch of pistons	0.7903	0.9718	1.1681	1.3902	1.6396	1.9546	2.3292	2.8029
11	Pressure expended in the slip of the screw, in pounds per square inch of pistons	1.5047	1.8819	2.4335	3.2093	4.3446	6.0717	8.0057	9.5392
12	Pressure expended in the propulsion of the vessel, in pounds per square inch of pistons	15.7110	18.2467	22.1245	27.3899	34.2438	41.2393	46.0649	49.5353
	DISTRIBUTION OF THE ENGINE-POWER.								
	Absolute:								
13	Gross effective horses-power developed by the engines	6.6234	8.4776	11.1805	14.9603	20.2075	26.7852	33.3026	39.3303
14	Horse-power expended in working the engines, *per se*	0.6171	0.6834	0.7501	0.8179	0.8884	0.9694	1.0577	1.1420
15	Net horses-power applied to the shaft	6.0063	7.7942	10.4304	14.1424	19.3191	25.8158	32.2449	38.1883
16	Horses-power absorbed by the friction of the load	0.4505	0.5845	0.7823	1.0606	1.4489	1.9362	2.4184	2.8641
17	Horses-power expended in overcoming the cohesive resistance of the water, by the screw-blades	0.2443	0.3318	0.4387	0.5688	0.7291	0.9472	1.2302	1.5978
18	Horses-power expended in the slip of the screw	0.4642	0.6431	0.9122	1.3126	1.9301	2.9431	4.2351	5.4468
19	Horses-power expended in the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
	Proportional:								
20	Per centum of the net power applied to the shaft, absorbed by the friction of the load	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
21	Per centum of the net power applied to the shaft, expended in overcoming the cohesive resistance of the water, by the screw-blades	4.06	4.26	4.20	4.02	3.77	3.67	3.82	4.19
22	Per centum of the net power applied to the shaft expended in the slip of the screw	7.73	8.25	8.75	9.28	9.99	11.40	13.13	14.26
23	Per centum of the net power applied to the shaft expended in the propulsion of the vessel	80.71	79.99	79.55	79.20	78.74	77.43	75.55	74.05

Table No. 3, containing the results of the experiments made with screw C, having the diameter 4¼ feet, the uniform pitch 5.136 feet, two blades directly opposite each other, and the fraction of the pitch 0.1785.

No. of line.		a	b	c	d	e	f	g	h
1	Speed of the vessel per hour, in geographical miles of 6,086 feet	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	Slip of the screw, in per centum of its speed	10.43	11.16	11.83	12.54	13.47	15.42	17.78	19.43
3	Thrust of the screw, in pounds, by dynamometer	315.4	368.8	449.9	560.6	707.0	867.1	990.7	1082.4
4	Horses-power, by dynamometer, applied to the propulsion of the vessel	4.8473	6.2348	8.2972	11.2104	15.2110	19.9893	24.3612	28.2796
5	Double-strokes of engines' pistons and revolutions of the screw made per minute	110.2455	122.4942	134.3952	146.7752	159.7246	175.1186	192.2588	208.3610
	DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.								
6	Mean gross-effective pressure on the pistons, in pounds per square inch	21.2074	24.5542	29.5884	36.2747	45.1418	54.8683	62.4379	68.2274
7	Pressure required to work the engines, *per se*, in pounds per square inch of pistons	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	Net pressure applied to the shaft, in pounds per square inch of pistons	19.2074	22.5542	27.5884	34.2747	43.1418	52.8683	60.4379	66.2274
9	Pressure absorbed by the friction of the load, in pounds per square inch of pistons	1.4406	1.6916	2.0691	2.7206	3.2356	3.9651	4.5328	4.9670
10	Pressure expended in overcoming the cohesive resistance of the water by the screw-blades, in pounds per square inch of pistons.	0.6204	0.7714	0.9297	1.1717	1.3115	1.5755	1.8977	2.2252
11	Pressure expended in the slip of the screw, in pounds per square inch of pistons	1.7882	2.2419	2.9078	4.0591	5.1986	7.2958	9.5734	11.4706
12	Pressure expended in the propulsion of the vessel, in pounds per square inch of pistons	15.3582	17.8493	21.6818	26.3233	33.3961	40.0319	44.4340	47.5646
	DISTRIBUTION OF THE ENGINE-POWER.								
	Absolute:								
13	Gross-effective horses-power developed by the engines	6.6912	8.5765	11.3239	15.1819	20.5598	27.3983	34.2298	40.5649
14	Horses-power expended in working the engines, *per se*	0.6287	0.6986	0.7664	0.8370	0.9109	0.9987	1.0964	1.1883
15	Net horses-power applied to the shaft	6.0625	7.8779	10.5575	14.3449	19.6489	26.3996	33.1334	39.3766
16	Horses-power absorbed by the friction of the load	0.4547	0.5908	0.7918	1.0759	1.4737	1.9800	2.4850	2.9532
17	Horses-power expended in overcoming the cohesive resistance of the water, by the screw-blades.	0.1961	0.2691	0.3553	0.4628	0.5964	0.7860	1.0401	1.3239
18	Horses-power expended in the slip of the screw	0.5644	0.7832	1.1132	1.6058	2.3678	3.6443	5.2471	6.8199
19	Horses-power expended in the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
	Proportional:								
20	Per centum of the net power applied to the shaft, absorbed by the friction of the load.	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
21	Per centum of the net power applied to the shaft, expended in overcoming the cohesive resistance of the water, by the screw-blades.	3.23	3.42	3.37	3.23	3.04	2.98	3.14	3.36
22	Per centum of the net power applied to the shaft, expended in the slip of the screw	9.31	9.94	10.54	11.19	12.05	13.80	15.84	17.32
23	Per centum of the net power applied to the shaft, expended in the propulsion of the vessel.	79.96	79.14	78.59	78.08	77.41	75.72	73.52	71.82

Table No. 4, containing the results of the experiments made with screw D, having the diameter 4½ feet, the uniform pitch, 5.136 feet, two blades directly opposite each other, and the fraction of the pitch 0.1014.

No. of line.		a	b		d		f	g	
1	Speed of the vessel per hour, in geographical miles, of 6,086 feet	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	Slip of the screw, in per centum of its speed	13.01	13.93	14.76	15.64	16.80	19.83	22.18	24.24
3	Thrust of the screw, in pounds by dynamometer	315.4	368.8	449.9	560.6	707.0	867.1	990.7	1082.4
4	Horses-power, by dynamometer, applied to the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
5	Double strokes of engines' pistons, and revolutions of the screw made per minute	113.5172	126.2550	139.0130	151.8217	166.1714	183.3535	203.0254	221.0284
	DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.								
6	Mean gross-effective pressure on the pistons, in pounds per square inch	21.0166	24.2691	29.1565	35.8818	44.5813	54.2337	61.7576	67.5689
7	Pressure required to work the engines, *per se*, in pounds per square inch of pistons	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	Net pressure applied to the shaft, in pounds per square inch of pistons	19.0166	22.2691	27.1565	33.8818	42.5813	52.2337	59.7576	65.5689
9	Pressure absorbed by the friction of the load, in pounds per square inch of pistons	1.4262	1.6702	2.0367	2.5411	3.1936	3.9175	4.4818	4.9177
10	Pressure expended in overcoming the cohesive resistance of the water by the screw-blades, in pounds per square inch of pistons	0.3765	0.4654	0.5649	0.6709	0.8048	0.9820	1.2011	1.3901
11	Pressure expended in the slip of the screw, in pounds per square inch of pistons	2.2402	2.8037	3.6254	4.7977	6.4809	9.1043	11.9933	14.0317
12	Pressure expended in the propulsion of the vessel, in pounds per square inch of pistons	14.9737	17.3298	20.9295	25.8721	32.1020	38.2299	42.0814	45.2294
	DISTRIBUTION OF THE ENGINE-POWER.								
	Absolute:								
13	Gross-effective horses-power developed by the engines	6.8029	8.7372	11.5574	15.5338	21.1241	28.3549	35.7528	42.5858
14	Horses-power expended in working the engines, *per se*	0.6474	0.7250	0.7928	0.8658	0.9467	1.0457	1.1578	1.2605
15	Net horses-power applied to the shaft	6.1555	8.0122	10.7646	14.6680	20.1774	27.3092	34.5950	41.3253
16	Horses-power absorbed by the friction of the load	0.4617	0.6009	0.8073	1.1001	1.5133	2.0482	2.5946	3.0994
17	Horses-power expended in overcoming the cohesive resistance of the water, by the screw-blades	0.1216	0.1674	0.2234	0.2910	0.3816	0.5126	0.6959	0.8980
18	Horses-power expended in the slip of the screw	0.7249	1.0091	1.4367	2.0765	3.0715	4.7591	6.9433	9.0483
19	Horses-power expended in the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
	Proportional:								
20	Per centum of the net power applied to the shaft, absorbed by the friction of the load	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
21	Per centum of the net power applied to the shaft, expended in overcoming the cohesive resistance of the water, by the screw-blades	1.98	2.09	2.08	1.98	1.89	1.88	2.01	2.12
22	Per centum of the net power applied to the shaft, expended in the slip of the screw	11.78	12.59	13.35	14.16	15.22	17.43	20.07	21.40
23	Per centum of the net power applied to the shaft, expended in the propulsion of the vessel	78.74	77.82	77.07	76.36	75.39	73.19	70.42	68.43

Table No. 5, containing the results of the experiments made with screw G, having the diameter 4½ feet, a pitch expanding in the direction of the axis from 6½ feet to 7½ feet, three blades, and the fraction of the pitch 0.3446.

No. of line.		a	b	c	d	e	f	g	h
1	Speed of the vessel per hour, in geographical miles of 6,086 feet	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	Slip of the screw, in per centum of its speed, calculated for its mean pitch	9.89	10.58	11.22	11.89	12.77	14.63	16.89	18.48
3	Thrust of the screw, in pounds, by dynamometer	315.4	368.8	449.9	560.6	707.0	867.1	990.7	1082.4
4	Horses-power, by dynamometer, applied to the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
5	Double-strokes of engines' pistons, and revolutions of the screw, made per minute	80.4029	89.1264	97.9321	106.9028	116.2882	127.3085	139.4847	151.0832
	DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.								
6	Mean gross-effective pressure on the pistons, in pounds per square inch	29.5351	34.3263	41.2660	50.7584	63.2041	76.9494	87.9421	96.4132
7	Pressure required to work the engines, *per se*, in pounds per square inch of pistons	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	Net pressure applied to the shaft, in pounds per square inch of pistons	27.5351	32.3263	39.2660	48.7584	61.2041	74.9494	85.9421	94.4132
9	Pressure absorbed by the friction of the load, in pounds per square inch of pistons	2.0651	2.4245	2.9449	3.6569	4.5903	5.6212	6.4457	7.0810
10	Pressure expended in overcoming the cohesive resistance of the water by the screw-blades, in pounds per square inch of pistons.	2.0068	2.4663	2.8537	3.4006	4.0260	4.8276	5.8003	6.8088
11	Pressure expended in the slip of the screw, in pounds per square inch of pistons	2.3205	2.9027	3.7550	4.9582	6.7155	9.4364	12.4473	14.8807
12	Pressure expended in the propulsion of the vessel, in pounds per square inch of pistons	21.1427	24.5328	29.7124	36.7427	45.8723	55.0642	61.2488	65.6427
	DISTRIBUTION OF THE ENGINE-POWER.								
	Absolute:								
13	Gross-effective horses power developed by the engines	6.7714	8.7238	11.5236	15.4728	20.9581	27.9340	34.9780	41.5359
14	Horses-power expended in working the engines, *per se*	0.4585	0.5083	0.5585	0.6097	0.6632	0.7260	0.7955	0.8616
15	Net horses-power applied to the shaft	6.3129	8.2155	10.9651	14.8631	20.2949	27.2080	34.1825	40.6743
16	Horses-power absorbed by the friction of the load	0.4735	0.6162	0.8224	1.1147	1.5221	2.0406	2.5637	3.0506
17	Horses-power expended in overcoming the cohesive resistance of the water by the screw-blades.	0.4601	0.6268	0.7969	1.0366	1.3350	1.7525	2.3070	2.9333
18	Horses-power expended in the slip of the screw	0.5320	0.7377	1.0486	1.5114	2.2268	3.4256	4.9506	6.4108
19	Horses-power expended in the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
	Proportional:								
20	Per centum of the net power applied to the shaft, absorbed by the friction of the load.	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
21	Per centum of the net power applied to the shaft, expended in overcoming the cohesive resistance of the water, by the screw-blades.	7.29	7.63	7.27	6.97	6.58	6.44	6.75	7.21
22	Per centum of the net power applied to the shaft, expended in the slip of the screw	8.43	8.98	9.56	10.17	10.97	12.59	14.48	15.76
23	Per centum of the net power applied to the shaft, expended in the propulsion of the vessel.	76.78	75.89	75.67	75.36	74.95	73.47	71.27	69.53

Table No. 6, containing the results of the experiments made with the Griffith screw H, having the diameter 4½ feet, a pitch expanding in the direction of the axis from 6½ feet to 7½ feet, three blades, and the fraction of the pitch 0.2034.

No. of line.		a	b	c	d	e		g	h
1	Speed of the vessel per hour, in geographical miles of 6,086 feet	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	Slip of the screw, in per centum of its speed, calculated for its mean pitch	11.60	12.44	13.20	14.01	15.08	17.31	20.06	21.99
3	Thrust of the screw, in pounds, by dynamometer	315.4	368.8	449.9	560.6	707.0	867.1	990.7	1,082.4
4	Horses-power, by dynamometer, applied to the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
5	Double strokes of engines' pistons, and revolutions of the screw, made per minute	81.9597	91.0206	100.1646	109.5338	119.4457	131.4289	145.0135	157.9068
	DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.								
6	Mean gross-effective pressure on the pistons, in pounds per square inch	28.8521	33.4934	40.4021	49.7401	62.0121	75.5576	86.3277	94.5013
7	Pressure required to work the engines, *per se*, per square inch of pistons	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	Net pressure applied to the shaft, in pounds per square inch of pistons	26.8521	31.4934	38.4021	47.7401	60.0121	73.5576	84.3277	92.5013
9	Pressure absorbed by the friction of the load, in pounds per square inch of pistons	2.0139	2.3620	2.8802	3.5805	4.5009	5.5168	6.3246	6.9376
10	Pressure expended in overcoming the cohesive resistance of the water by the screw-blades, in pounds per square inch of pistons	1.3752	1.6964	2.0541	2.4567	2.9208	3.5371	4.3052	5.0539
11	Pressure expended in the slip of the screw, in pounds per square inch of pistons	2.7217	3.4129	4.4177	5.8426	7.9306	11.1656	14.7838	17.7043
12	Pressure expended in the propulsion of the vessel, in pounds per square inch of pistons	20.7413	24.0221	29.0501	35.8603	44.6598	53.3381	58.9141	62.8064
	DISTRIBUTION OF THE ENGINE-POWER.								
	Absolute:								
13	Gross-effective horses-power developed by the engines	6.7429	8.6930	11.5395	15.5355	21.1211	28.3164	35.6967	42.5508
14	Horses-power expended in working the engines, *per se*	0.4674	0.5191	0.5712	0.6247	0.6812	0.7495	0.8270	0.9005
15	Net horses-power applied to the shaft	6.2755	8.1739	10.9683	14.9108	20.4399	27.5669	34.8697	41.6503
16	Horses-power absorbed by the friction of the load	0.4707	0.6139	0.8226	1.1183	1.5330	2.0675	2.6152	3.1238
17	Horses-power expended in overcoming the cohesive resistance of the water by the screw-blades	0.3214	0.4403	0.5867	0.7673	0.9948	1.3256	1.7802	2.2752
18	Horses-power expended in the slip of the screw	0.6361	0.8858	1.2618	1.8248	2.7011	4.1845	6.1131	7.9717
19	Horses-power expended in the propulsion of the vessel	4.8473	6.2348	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
	Proportional:								
20	Per centum of the net power applied to the shaft, absorbed by the friction of the load	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
21	Per centum of the net power applied to the shaft, expended in overcoming the cohesive resistance of the water by the screw-blades	5.12	5.39	5.35	5.15	4.86	4.81	5.10	5.46
22	Per centum of the net power applied to the shaft, expended in the slip of the screw	10.14	10.83	11.50	12.24	13.22	15.18	17.53	19.14
23	Per centum of the net power applied to the shaft, expended in the propulsion of the vessel	77.24	76.28	75.65	75.11	74.42	72.51	69.87	68.00

DISCUSSION OF THE RESULTS OF THE EXPERIMENTS IN THE PRECEDING TABLES.

Of the resistance of the hull at different speeds.—In the following table will be found the experimental resistances of the hull in pounds, for speeds varying by 0.1 geographical mile per hour between the speeds of 5.0 and 8.5 geographical miles per hour, both inclusive, and the ratio of these resistances as compared with the ratio of the squares of the respective speeds:

Speeds of the vessel in geographical miles per hour.	Squares of the speeds of the vessel, proportionally.	Resistances of the vessel at the different speeds.		Speeds of the vessel in geographical miles per hour.	Squares of the speeds of the vessel, proportionally.	Resistances of the vessel at the different speeds.	
		In pounds avoirdupois.	Proportionally.			In pounds avoirdupois.	Proportionally.
5.0	1.0000	315.4	1.0000	6.8	1.8496	644.7	2.0441
5.1	1.0404	323.3	1.0250	6.9	1.9044	676.3	2.1443
5.2	1.0816	333.2	1.0564	7.0	1.9600	707.0	2.2416
5.3	1.1236	344.1	1.0910	7.1	2.0164	739.6	2.3450
5.4	1.1664	356.0	1.1287	7.2	2.0736	773.2	2.4515
5.5	1.2100	368.8	1.1693	7.3	2.1316	805.8	2.5549
5.6	1.2544	380.7	1.2070	7.4	2.1904	836.5	2.6522
5.7	1.2996	397.5	1.2603	7.5	2.2500	867.1	2.7492
5.8	1.3456	414.3	1.3136	7.6	2.3104	895.8	2.8402
5.9	1.3924	431.1	1.3668	7.7	2.3716	920.5	2.9185
6.0	1.4400	449.9	1.4264	7.8	2.4336	946.3	3.0003
6.1	1.4884	470.7	1.4924	7.9	2.4964	967.0	3.0659
6.2	1.5376	490.4	1.5548	8.0	2.5600	990.8	3.1414
6.3	1.5876	513.2	1.6271	8.1	2.6244	1009.5	3.2007
6.4	1.6384	536.9	1.7023	8.2	2.6896	1027.3	3.2571
6.5	1.6900	560.6	1.7774	8.3	2.7556	1043.2	3.3076
6.6	1.7424	587.3	1.8621	8.4	2.8224	1057.0	3.3513
6.7	1.7956	616.0	1.9531	8.5	2.8900	1082.4	3.4318

During the experiments, it was remarked that the vessel's "trim," or her relative draught of water forward and aft, varied with every variation of speed, the bow rising and the stern falling as the speed increased. At the maximum speeds, the variation of the draught of water forward and aft was excessive. By this continual change of trim as the speed changed, the immersed solid of the hull was continually changing in form. Strictly, there was a succession of vessels, instead of the same vessel, at different speeds; and the resistances in the above table show, in reality, not the resistance of the same immersed solid at different speeds, but the resistances of immersed solids differing more or less from each other with every change of speed. The results of the experiments show that the resistance of these different immersed solids varied widely from the law of its proportionality to the squares of their speeds, increasing with increased speed sometimes less rapidly and sometimes more rapidly than due to that law, according as the actual immersed solid varied more or less favorably in function of resistance. To show this effect quantitatively, there has been placed in the following table, opposite the column of the vessel's speed, another containing the amount by which the resistance varied from the law of the squares, that amount being expressed in per centum of what the resistance would have been according to the law of its proportionality to the squares of the speeds. The prefixes of minus and plus indicate, respectively, whether the variation was less or more than the law:

Speeds of the vessel in geographical miles per hour.	Per centum of the resistance due to the law of its proportionality to the square of the speed, which the experimental resistance varied from that law.	Speeds of the vessel in geographical miles per hour.	Per centum of the resistance due to the law of its proportionality to the square of the speed, which the experimental resistance varied from that law.	Speeds of the vessel in geographical miles per hour.	Per centum of the resistance due to the law of its proportionality to the square of the speed, which the experimental resistance varied from that law.	Speeds of the vessel in geographical miles per hour.	Per centum of the resistance due to the law of its proportionality to the square of the speed, which the experimental resistance varied from that law.
5.0	.....	5.9	— 1.84	6.8	+ 9.51	7.7	+ 23.06
5.1	— 1.48	6.0	— 0.94	6.9	+ 11.19	7.8	+ 23.29
5.2	— 2.33	6.1	+ 0.27	7.0	+ 14.37	7.9	+ 22.81
5.3	— 2.90	6.2	+ 1.12	7.1	+ 16.29	8.0	+ 22.71
5.4	— 3.23	6.3	+ 2.49	7.2	+ 18.22	8.1	+ 21.96
5.5	— 3.36	6.4	+ 3.75	7.3	+ 19.86	8.2	+ 21.10
5.6	— 3.78	6.5	+ 5.17	7.4	+ 21.08	8.3	+ 20.03
5.7	— 3.02	6.6	+ 6.43	7.5	+ 22.19	8.4	+ 18.74
5.8	— 2.38	6.7	+ 8.07	7.6	+ 22.93	8.5	+ 18.75

From the above table it will be seen that the variation of the resistance of the hull from the law of its proportionality to the squares of the speeds was irregular in quantity, alternately increasing and decreasing. From the speed of 5.0 geographical miles per hour to that of between 6.0 and 6.1 geographical miles, the resistance varied in a lower ratio than that of the squares of the speeds, the ratio slowly decreasing until, at the speed of 5.6 geographical miles per hour, it was 3.78 per centum less than was due to the law. From the speed of 5.6 geographical miles per hour to that of between 6.0 and 6.1 geographical miles, the ratio slowly increased until, at the speed of between 6.0 and 6.1 geographical miles, the resistance was in exact accord with the law. From the latter speed, the resistance rapidly increased above that due to the law, up to the speed of 7.8 geographical miles per hour, where it was 23.29 per centum greater than was due to the law. From the speed of 7.8 geographical miles per hour, the variation from the law decreased until, at the speed of 8.5 geographical miles, the resistance was 18.75 per centum greater than was due to the law.

Components of the resistance of the hull.—The power applied to the propulsion of the hull is divided between effecting the displacement of the water, that is to say, scooping out the watery furrow or trench measured by the area of the vessel's greatest immersed transverse section and the distance run, and overcoming the friction of the immersed external surface of the vessel on the water. If we suppose that surface to have remained constant during the experiments, which was very nearly the case, its frictional resistance can be calculated for every variation of speed. It will be, in fact, in the ratio of the squares of the speeds; and, by deducting it from the experimental resistance of the vessel, the remainder will be the resistance of the immersed solid of the hull in function of form. The calculation of this frictional resistance with exactness is impossible, on account of the continuously varying curvature of the immersed surface of the hull. The speed of this surface relatively to the water in contact with it, is nowhere as great as the vessel's speed, except for the keel and other flat surfaces parallel thereto. An approximation, however, can be made by considering the speed of the surface relatively to the water in contact with it to be less than the speed of the vessel, in the ratio of the base to the hypothenuse of a right-angled triangle whose base is represented by the half length of the water-line, and whose height is represented by the half breadth of the water-line. The resistance of a square foot of the immersed surface, moving with the velocity of 10 feet per second, will be taken at 0.45 pound, and to vary as the squares of the speeds of the speeds. Applying this data, the speed of the surface is 8.26 feet per second when the speed of the vessel is 5.0 geographical miles per hour; hence the resistance of the 717 square feet of immersed surface of the hull, at that speed, is $\left(\frac{717 \times 0.45 \times 8.26^2}{10^2} = \right)$ 220.14 pounds.

In the columns of the following table, among others, will be found the frictional resistance of the immersed external surface of the hull; its resistance in function of form, and the variations of the latter from the law of the proportionality of the resistance to the square of the speed from 5.0 to 8.5 geographical miles per hour, both inclusive:

Speeds of the vessel, in geographical miles per hour.	Squares of the speeds of the vessel, proportionally.	Resistances of the vessel at the different speeds.				
		Resistance of the vessel, in pounds.	Frictional resistance of the external immersed surface of the hull, in pounds.	Resistances of the vessel in function of form alone.		
				In pounds.	Proportionally.	Per centum of the resistance of the hull in function of form, due to the law of its proportionality to the square of the speed, which the experimental resistance varied from that law.
5.0	1.0000	315.4	220.1	95.3	1.0000	.....
5.1	1.0404	323.3	229.0	94.3	0.9895	− 4.89
5.2	1.0816	333.2	238.1	95.1	0.9979	− 7.74
5.3	1.1236	344.1	247.3	96.8	1.0158	− 9.59
5.4	1.1664	356.0	256.8	99.2	1.0409	−10.76
5.5	1.2100	368.8	266.4	102.4	1.0745	−11.20
5.6	1.2544	380.7	276.1	104.6	1.0976	−12.50
5.7	1.2996	397.5	286.1	111.4	1.1689	−10.05
5.8	1.3456	414.3	296.2	118.1	1.2392	− 7.91
5.9	1.3924	431.1	306.5	124.6	1.3074	− 6.10
6.0	1.4400	449.9	317.0	132.9	1.3945	− 3.16
6.1	1.4884	470.7	327.7	143.0	1.5005	+ 0.81
6.2	1.5376	490.4	338.5	151.9	1.5939	+ 3.66
6.3	1.5876	513.2	349.5	163.7	1.7177	+ 8.19
6.4	1.6384	536.9	360.7	176.2	1.8489	+12.85
6.5	1.6900	560.6	372.0	188.6	1.9790	+17.10
6.6	1.7424	587.3	383.6	203.7	2.1375	+22.68
6.7	1.7956	616.0	395.3	220.7	2.3158	+28.97
6.8	1.8496	644.7	407.2	237.5	2.4921	+34.74
6.9	1.9044	676.3	419.2	257.1	2.6978	+41.66
7.0	1.9600	707.0	431.5	275.5	2.8909	+47.50
7.1	2.0164	739.6	443.9	295.7	3.1028	+53.88
7.2	2.0736	773.2	456.5	316.7	3.3232	+60.26
7.3	2.1316	805.8	469.2	336.6	3.5320	+65.69
7.4	2.1904	836.5	482.2	354.3	3.7177	+69.73
7.5	2.2500	867.1	495.3	371.8	3.9014	+73.40
7.6	2.3104	895.8	508.6	387.2	4.0630	+75.86
7.7	2.3716	920.5	522.1	398.4	4.1805	+76.27
7.8	2.4336	946.3	535.7	410.6	4.3085	+77.04
7.9	2.4964	967.0	549.5	417.5	4.3809	+75.49
8.0	2.5600	990.8	563.5	427.3	4.4837	+75.14
8.1	2.6244	1009.5	577.7	431.8	4.5310	+72.65
8.2	2.6896	1027.3	592.1	435.2	4.5666	+66.07
8.3	2.7556	1043.2	606.6	436.6	4.5813	+66.26
8.4	2.8224	1057.0	621.3	435.7	4.5719	+61.99
8.5	2.8900	1082.4	636.2	446.2	4.6820	+62.01

From the above table, it will be seen that the variation of the resistance of the hull in function of form alone, is irregular, and very great from the law of its proportionality to the squares of the speeds, alternately decreasing and increasing. That variation is shown numerically in the last column of the table, in per centum of what the resistance would have been according to the above law; the prefixes of minus and plus indicate that the variation is below or above the law.

From the speed of 5.0 geographical miles per hour, the resistance increased in a less ratio than the law of the squares, up to the speed of 5.6 geographical miles per hour where the difference was 12.50 per centum less than what the law of the squares required. From the speed of 5.6 geographical miles per hour, the variation from the law slowly decreased until, at the speed of nearly 6.1 geographical miles per hour, the resistance was in accord with the law. From the latter speed, the resistance rapidly increased above that due to the law up to the speed of 7.8 geographical miles per hour,

where it was 77.04 per centum greater than was due to the law. From the speed of 7.8 geographical miles per hour, the variation from the law decreased until, at the speed of 8.5 geographical miles per hour, the resistance was 62 per centum greater than was due to the law.

The resistance of the vessel at the different speeds was not only affected by the speed, but also, and greatly, by the action of the screw, the slip of which operated to excavate the water at the stern; and, as the slip of the screw in per centum of its axial velocity increased with the speed of the vessel, this cause was aggravated in producing at the higher speeds the great variation of the resistance of the hull above the law of its proportionality to the squares of the speeds.

Of the influence of the number of blades into which the same area of the same kind of screw-surface is divided, and of their position.—Screws A, E, and F have exactly the same diameter, pitch, and surface; their only variation being in the number of blades into which that surface is divided. Screw A has two blades, one directly opposite the other. Screw E has four blades, arranged in pairs; the blades of each pair are directly opposite each other, and each pair is at right angles to the other. Screw F is a Mangin screw, sometimes called a duplex screw. It is composed of the two pairs of blades of screw E, with one pair placed directly behind the other, so that when viewed in projection on a plane at right angles to the axis of the screw, they appear as only one pair. This was effected by revolving the after pair of blades upon the shaft, until it came in exact projection with the forward pair.

The propelling efficiency of these three screws is exactly the same. They all give an identical slip for the same speed of vessel; and, as their surface is the same in area and in kind, and as they make equal revolutions for equal speeds, the power absorbed by their surface in overcoming the cohesive resistance of the water must be equal.

From these results the inference is warranted that, *in the case of screws having the same kind and quantity of surface, their propelling efficiency, in smooth water, is not affected by either the number or the position of their blades.*

The above equality of effect is limited strictly to the case of *smooth water*, because, in rough water, the superiority in propelling efficiency of the four-bladed over the two-bladed screw, both having the same kind and quantity of surface, is well established. This superiority results wholly from the pitching of the vessel in rough water, whereby, during a given portion of the time, a greater portion of the two-bladed screw is raised out of the water than of the four-bladed screw. Were the entire pitch used, that is to say, did the screw-surface fill its entire disk when projected on a plane at right angles to its axis, the equality of effect of screws of different numbers of blades, but otherwise the same, would be equal both in smooth and in rough water; but when only a small fraction of the pitch (from $\frac{1}{4}$ to $\frac{1}{8}$ as is the case in practice) is used, this equality no longer obtains, and the fewer the number of blades into which the surface is distributed, the less becomes the propelling efficiency in rough water. For illustration, take the extreme case of a screw having only one blade, and using only, say, one-fourth of the pitch, a moderate degree of pitching by the vessel would keep the whole of this surface out of the water during one-half of the time; if, however, the same quantity and kind of surface were distributed in two blades placed opposite each other, only one-half of the surface could be kept out of the water one-half of the time, and with four equidistant blades, a still less portion of the surface would be thus inoperative.

In the following table will be found the slips of screws A, E, and F, for the speeds of vessel from 5.0 geographical miles per hour to 8.5, increasing by one-tenth of a geographical mile per hour. These slips are taken from the curve obtained in the manner hereinbefore described, and they are expressed in per centum of the axial speed of the screw:

Speed of the vessel in geographical miles per hour.	Slip of the screw in per centum of its speed.	Speed of the vessel in geographical miles per hour.	Slip of the screw in per centum of its speed.	Speed of the vessel in geographical miles per hour.	Slip of the screw in per centum of its speed.	Speed of the vessel in geographical miles per hour.	Slip of the screw in per centum of its speed.
5.0	7.82	5.9	8.79	6.8	9.76	7.7	12.28
5.1	7.92	6.0	8.87	6.9	9.93	7.8	12.63
5.2	8.03	6.1	8.96	7.0	10.10	7.9	12.95
5.3	8.15	6.2	9.08	7.1	10.33	8.0	13.33
5.4	8.26	6.3	9.19	7.2	10.60	8.1	13.65
5.5	8.37	6.4	9.30	7.3	10.88	8.2	13.91
5.6	8.49	6.5	9.40	7.4	11.20	8.3	14.16
5.7	8.59	6.6	9.50	7.5	11.56	8.4	14.38
5.8	8.69	6.7	9.62	7.6	11.92	8.5	14.57

Had the resistances of the vessel at different speeds been in the ratio of the squares of those speeds, and had the water acted on by the screw continued in the same condi-

tion at those different speeds, then the slip of the screw would have been constant, retaining the same per centum of its axial speed at all speeds of vessel. But, as the vessel's resistance at different speeds varied from the law of the square of the speed and as the water on which the screw acted did not continue in the same condition at different speeds of vessel, not filling the watery furrow made by the passage of the vessel, as rapidly at the higher speeds as at the lower, the screw's slip will vary according to the value of those two causes.

Of the slips of screws of the same kind of surface, but of different quantities of surface.—Screws B, C, and D have the same diameter, pitch, number and form of blades as screw A, differing from it only in quantity of surface. The helicoidal surface of screw A is 6.1321 square feet; of screw B, 4.8078 square feet; of screw C, 3.0661 square feet; and of screw D, 1.7417 square feet. An examination of their slips for equal speeds of vessel, relatively to their surfaces, will detect the law which determines their slips in function of their surfaces. This examination having been made for the experimental slips of each of the above screws, taken from its separate curve of slips, as hereinbefore described, for each speed of vessel from 5.0 geographical miles per hour to 8.5, increasing by one-tenth of a geographical mile per hour, there results the following law: *The absolute slips of screws having the same kind of surface and differing only in its quantity, are for the same speed of the same vessel in the ratio of the square roots of their surfaces.* By absolute slip is meant the speed of the water-current, in geographical miles per hour, (not in per centum,) caused by the screw in the exactly opposite direction to the vessel's course, and due to the mobility of the water in furnishing a fulcrum for the action of the screw.

The *rationale* of the above law is—

1st. That the resistance of water to motion is as the square of the impressed velocity.

2d. That the resistance of the water to the advance of the vessel is equilibrated by the resistance of the water to the thrust of the screw.

3d. That, let the surface of the screw be what it may, the resistance of the water equilibrating its thrust is equal.

4th. That, the water, being a liquid, yields by virtue of its mobility to the thrust of the screw, and that the velocity or absolute slip, thus imparted to the water by the thrust of the screw, will be such that the product of the square of this velocity of the water and of the surface of the screw will be constant for a given speed of vessel.

Now, if S = the surface of the screw, and V = the velocity of the water, or absolute slip of the screw, for any given speed of vessel, then $S \times V^2$ will be a constant for that speed of vessel; and if the value of S be changed, then, to maintain the constancy of the product $S \times V^2$, the value of V must be changed in the inverse ratio of the square roots of S in the two cases.

For example: Let S = 25 square feet, and V = 2 geographical miles per hour with any given speed of vessel; then, $25 \times 2^2 = 100$ = the constant. Now, if S be reduced to 9 square feet, then to find the value of V in the new case, the speed of the vessel remaining as before, we have $\sqrt{9} : \sqrt{25} :: 2 : 3\frac{1}{3}$ geographical miles per hour, which is the velocity of the water pressed by the new screw surface 9 square feet, to give the vessel the same speed as before, because $3\frac{1}{3}^2 \times 9 = 100$ = the constant.

When the speed of the vessel and the absolute slip of the screw are known in geographical miles per hour, the relative slip of the screw, that is to say, its slip proportionally to its axial speed, is easily obtained and is usually expressed in per centum of the latter. For example, suppose in the first of the above cases that the speed of the vessel was 8 geographical miles per hour and the absolute slip of the screw 2 geographical miles per hour, then the axial speed of the screw would be $(8 + 2 =)$ 10 geographical miles per hour, of which 2 geographical miles per hour is 20 per centum, and this would be the slip of the screw. Now, in the second of the above cases, when the surface of the screw was reduced, but the speed of the vessel remained constant, the absolute slip of the screw being $3\frac{1}{3}$ geographical miles per hour, and the vessel's speed being 8 geographical miles per hour as before, the axial speed of the screw becomes $(8 + 3\frac{1}{3} =)$ $11\frac{1}{3}$ geographical miles per hour, and the slip of the screw becomes 29.41 per centum of its axial speed. By its axial speed is meant the product of its pitch and the number of revolutions made by it in a given time. This product is equal to the sum of the vessel's speed and that of the absolute slip of the screw.

When the speed of the vessel is given in geographical miles per hour, and the slip of the screw is given in per centum of the unknown axial speed of the screw, the slip of the screw in geographical miles per hour can be obtained from the following considerations:

Assuming the unknown axial speed of the screw to be represented by 100, its slip being known proportionally to this number, or in per centum of the screw's speed, the vessel's speed will be represented relatively to that of the slip by the difference between these two quantities, so that we thus have the speed of the slip and the speed of the vessel expressed proportionally; whence, as the absolute speed of the vessel per hour in geographical miles is given, the absolute speed of the slip of the screw in geographical miles per hour will be obtained by the simple proportion, as the vessel's speed in per centum of the screw's speed, is to the screw's slip in per centum of the

screw's speed, so is the vessel's absolute speed in geographical miles per hour, to the screw's absolute speed in geographical miles per hour.

For example, suppose the known slip of the screw to be 20 per centum of the screw's unknown axial speed, and the known speed of the vessel to be 8 geographical miles per hour, then the speed of the vessel relatively to the unknown speed of the screw will be (100 — 20 =) 80, and the proportion for obtaining the absolute slip of the screw in geographical miles per hour will be 80 : 20 :: 8 : 2, the screw's slip in geographical miles per hour.

The surface of the screw may be the helicoidal surface, or its projection on a plane at right angles to or parallel with the axis, or it may be expressed by the fraction used of the pitch. Any of these quantities may be used, so long as the same ones are continued throughout, the screw-blade having, of course, the same form or outline in all cases. That is to say, if its front and back edges are parallel and at right angles in one case, they are to remain so for the other cases.

Of the influence on the slip of the screw due to curving the front and back edges of its blades to the Griffith form, and to substituting a globe for the central portion of the screw-surface.—Screw H was made from screw G by cutting the forward and after edges of the latter to the Griffith form, and by bolting upon the hub between the blades pieces of wood accurately fitted to those spaces, forming a globe around the screw's axis of 1.25 feet diameter, equal to 28.85 per centum of the screw's diameter. The diameter of the hub of screw H was 11.54 per centum of the screw's diameter. As screw G had a pitch continuously expanding from the forward edge of its blades to the after edge, the result of cutting off surface at those edges was to slightly increase the initial and lessen the final pitch for screw H, leaving the mean pitch unchanged, and, consequently, the same in both screws H and G. The change of pitch thus made was not material in its effect upon the slip. The reduction of surface, however, was considerable, both at the center and at the periphery of the screw, and its effect was to greatly increase the slip, raising it from 18.48 per centum, when the vessel's speed was 8.5 geographical miles an hour, to 21.99 per centum of the screw's axial speed.

Of the relative economic propelling efficiency of the screws.—The function of a screw being to apply to the propulsion of a vessel the power received by its shaft from the engine, and the power thus received being the net power developed by the engine, that is, the power which remains after deducting what is necessary to work the engine *per se*, it is evident that the economic propelling efficiency of a screw will be represented by the per centum of the net power developed by the engine, which is expended in the propulsion of the vessel. This per centum will be found on the last line (23) of the preceding tables, numbered from 1 to 6, both inclusive, containing the data and results of the experiments.

In the following table, No. 7, this per centum will be found expressed, relatively for the different screws at the different speeds of vessel from 5.0 to 8.5 geographical miles per hour.

Table No. 7, containing the relative economic propelling efficiency of screws A, B, C, D, E, F, G, and H.

Relative economic propelling efficiency of screws.	Speed of the vessel per hour in geographical miles of 6,086 feet.							
	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
In per centum of the net power applied to the screw-shaft.								
A, E, and F	79.81	79.09	78.73	78.47	78.23	77.12	75.41	74.65
B	80.71	79.99	79.55	79.20	78.74	77.43	75.55	74.05
C	79.96	79.14	78.59	78.08	77.41	75.72	73.52	71.82
D	78.74	77.82	77.07	76.36	75.39	73.19	70.42	68.43
G	76.78	75.89	75.67	75.36	74.95	73.47	71.27	69.53
H	77.24	76.28	75.65	75.11	74.42	72.51	69.87	68.00
Relatively.								
A, E, and F	0.9888	0.9887	0.9897	0.9908	0.9935	0.9960	0.9981	1.0000
B	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
C	0.9907	0.9894	0.9879	0.9859	0.9831	0.9779	0.9731	0.9699
D	0.9756	0.9729	0.9688	0.9651	0.9574	0.9452	0.9321	0.9241
G	0.9513	0.9487	0.9512	0.9515	0.9519	0.9489	0.9433	0.9390
H	0.9570	0.9536	0.9510	0.9484	0.9451	0.9365	0.9248	0.9183

An examination of the immediately preceding table shows that, at all the experimental speeds, the propelling efficiency of screw B was the most economical, except in the single instance of screws A, E, and F, at the vessel's maximum speed of 8.5 geographical miles per hour, which gave an equal result.

The propelling efficiency of screws A, E, and F ranged from equality with that of

screw B at the maximum speed of vessel to one per centum less economical at the minimum speed.

The screw C was less economically efficient than screw B by quantities ranging from one per centum at the minimum speed of vessel to three per centum at the maximum speed.

The screw D was less economically efficient than screw B by quantities ranging from 2½ per centum at the minimum speed of vessel to 7½ per centum at the maximum speed.

These results from screws A, E, and F, and screws B, C, and D, which only differed in that the three latter were composed of less fractions of the pitch than the three former, show that each diminution of this fraction below that of screws A, E, and F, namely, 0.3570, was economically injurious, the loss of useful effect by the increase of slip consequent on this diminution being greater than the gain of useful effect by the friction of the screw's surface on the water, due to the same cause.

Screw G, composed of nearly the same fraction of pitch as screw B, namely, 0,3446, and having the same diameter, had a pitch which differed in kind from that of screw B, and in quantity. It was both greater and, instead of being uniform, expanded continuously from the forward to the after edge of the blades. Screw G was less economically efficient than screw B by quantities ranging from 5 per centum at the minimum speed of vessel to 6 per centum at the maximum speed.

Screw H was the Griffith screw, formed from screw G by decreasing its surface at the center and at the periphery. It was less economically efficient than screw B by quantities ranging from 4½ per centum at the minimum speed of vessel to 8 per centum at the maximum speed.

The foregoing relative economic propelling efficiencies of the different screws are for *smooth water with the vessel unaffected by wind.* The effect of a head wind being to increase the resistance of a vessel, increases correspondingly the slips of the screws, and consequently changes their relative propelling efficiencies, thereby making those which gave the less propelling efficiency when unaffected by a head wind give a still less propelling efficiency when affected by it. In the case of an aft wind this result would be reversed. The trials of different screws in smooth water, with the vessel unaffected by wind, give their relative propelling efficiencies for those conditions only; but if those conditions be changed, these relative propelling efficiencies will change also. A really exhaustive series of experiments on screws would embrace the determination of their relative economic propelling efficiencies in smooth water with the vessel unaffected by wind, in smooth water with head wind and also with aft wind, in rough water with the vessel unaffected by wind, and in rough water with head wind and also with aft wind. Such a trial would show that the relative economic propelling efficiencies of screws of different types, dimensions, and proportions, applied to the same vessel, varied greatly with the varying conditions of wind and water, even to reversal in many cases, so that the screw which gave the highest result under one set of conditions might give the lowest under another.

Of the influence of different surfaces of screws otherwise the same, on the piston-pressure.—It is evident that, with the same engine and the same pitch of screw, abstraction being made of the friction of the screw-surface on the water, the net pressure on the piston of the engine must be the same at the same speed of vessel, let the surface of the screw and its slip be what it may. Accordingly, if we examine the remainder of the quantities on line 8, after deducting those on line 10, and for corresponding columns, in tables No. 1 to No. 4, both inclusive, containing the data and results of the experiments with screws A, E, and F, and B, C, and D, we shall find such to be the fact. The quantities on line 8 are the net pressures on the piston; that is to say, they are the pressures which remain after deducting from the mean gross-effective indicated pressure, (line 6,) the pressure (line 7) required to work the engine *per se.* The quantities on line 10 are the piston-pressures required for overcoming the cohesive resistance of the water by the screw-blades; or, as it is often termed for brevity, though incorrectly, for overcoming the friction of the screw-surface on the water. Making the comparison for the speed of vessel 8.5 geographical miles per hour, column h of the tables, we have the following results:

Screw.	Net pressure on the piston, (line 8,) in pounds, per square inch.	Piston-pressure to overcome the friction of the screw surface on the water, (line 10,) in pounds, per sq. inch.	Difference of the two preceding columns.	Slip of the screw in per centum of its speed.	Fraction used of the pitch of the screw.
A, E, and F	68.1537	3.9665	64.1872	14.57	0.357
B	66.8945	2.8029	64.0916	16.15	0.372
C	66.2274	2.2252	64.0022	19.43	0.188
D	65.5689	1.3901	64.1788	24.24	0.101

Of the influence of different pitches of screws, be their other dimensions what they may, on the piston-pressure.—With the same engine, it is also evident that, in the case of screws of different pitches, abstraction being made of the friction of the screw-surface on the water, the net pressure on the piston of the engine must, at the same speed of vessel, be in the direct ratio of the pitches, let the other dimensions of the screws, and their slips, be what they may; for the pitch measures the leverage at which the piston-pressure acts, and, when the speed of the vessel is the same, the slip cannot affect the problem, nor, consequently, can the dimensions of the screw other than the pitch, because their only function is to obtain a fulcrum from the water by embracing a sufficient quantity of that mobile substance.

This assumption can be tested by comparing the results from screws A to D, both inclusive, whose pitch is 5.136 feet, with those from screws G and H, whose pitches are 7 feet.

The net piston-pressure, less the pressure required to overcome the friction of the screw-surface on the water, is, for screws A to D, as above determined, 64.11495 pounds per square inch, which, increased in the ratio of 5.136 to 7.000, gives 87.3842 pounds per square inch of piston for the pressure with screw G. On referring to table No. 5, line 8, column h, we find the quantity 94.4132; and, on line 10, same table and column, the quantity 6.8088; deducting the latter from the former, we have 87.6044 pounds per square inch of piston, or almost exactly the same as obtained by the calculation from screws A to D, both inclusive.

Making the comparison for screw H in the same manner, we have the 64.11495 pounds per square inch of piston with screws A to D, increased to (5.136 : 7 :: 64.1145 :) 87.3842 pounds with screw H. On referring to table No. 6, line 8, column h, we find the quantity 92.5013; and, on line 10, same table and column, the quantity 5.0530; deducting the latter from the former, we have 87.4483 pounds, which is almost exactly the same as the 87.3842 pounds.

Trials of the machinery of the United States steam-launch No. 4, with screw G, made on the 17th of February, 1870, with the vessel secured to the wharf of the Mare Island navy-yard, Cal.

During the experiments with screws A to H, made with the steam-launch No. 4, in the bay in front of Mare Island, two trials of screw G were made with the vessel secured to the wharf of the navy-yard, at right angles to the current, from the effect of which it was also shielded by the projecting wharf, so that the resistance of the screw was no more affected by the current than if the trials had been in still water. The vessel's draught of water was the same as during the experiments in the bay, and the same indicators and dynamometer were employed.

The trials were made on the 17th of February, 1870, and each lasted thirty minutes, during which a continuous dynamometer-diagram; and indicator-diagrams were taken from each end of each cylinder as rapidly as possible; all preparations facilitating dispatch having previously been made.

The machinery was operated for an hour before commencing the trials, to bring it into normal working condition; and during the trials, the steam-pressure in the boiler, the height of the barometer, and the temperatures of the external atmosphere in the shade, of the engine-room, and of the water in the bay, were taken at the end of every three minutes. The number of double-strokes made by the engines' pistons was shown by the register.

The objects of the experiments were to ascertain: 1st. How nearly the thrust of the screw followed the proportion of the square of the number of revolutions made by it in equal time, under the extreme conditions of widely varying power and with the screw acting always at the same place, the water flowing to the screw without the screw advancing through the water. 2d. To what extent the proportion of dynamometer-power varied from the indicated power under these extreme conditions, and with the greatly varying speeds of pistons and pressures upon them. 3d. The pressure upon the pistons required to work the engines *per se*. To determine the 3d the engines, after the completion of the trials, were uncoupled from the line-shafting, and worked at various speeds of piston with the feed-pump pumping at its proper rate to supply the boiler, a considerable number of indicator-diagrams being taken at each speed from each end of each cylinder. The results varied but very slightly, and with the addition of a trifle for the friction of the line-shafting, gave two pounds per square inch of pistons for the pressure required at all speeds of piston to work the unloaded engines.

The data and results of these wharf-trials will be found in the following table No. 8, arranged in two columns, headed respectively "1st trial" and "2d trial." In the "1st trial" the number of revolutions made by the screw in equal times was ([illegible]=) 2.796 times more than in the "2d trial," a sufficiently great difference to strongly mark the consequences. The squares of the number of revolutions made by the screw in equal time during each trial, compare as 7.8176 and 1.0000 respectively.

The pressure (2 pounds per square inch of pistons) required to work the engines, *per*

se, being deducted from the gross effective indicated pressure per square inch of pistons, leaves a quantity called the "net pressure," which, in the two trials, should have the same ratio as the squares of the number of revolutions made by the screw in equal time. The net pressures compare as $(\frac{98}{14}:\frac{9}{7}=)$ 7.1533 to 1.0000. We have seen that the squares of the number of revolutions made by the screw in equal time compared as 7.8176 to 1.0000, which was doubtless caused by the water not flowing in with sufficient rapidity to solidly fill the displacement by the screw as fast as formed. The discrepancy is considerable; the pressure at the high speed of screw being 8¼ per centum less than it should have been, had the water on which it acted been as solid as at the low speed. It was observed constantly, during the trials, that there was no surface-current of water flowing from the bow towards the stern to replace the water displaced by the screw. On the contrary, the surface-water was absolutely quiescent; it had no movement in any direction. The water supplying the screw came up from beneath in nearly a vertical column. The depth of water at the wharf was very considerable, and it had a free movement between the bottom and the vessel's keel. An unbroken wave or elevation of water covered the screw during its action; the height of this wave varying, of course, with the rapidity of the rotation of the screw.

In the "1st trial," the dynamometrical horses-power is $(\frac{24.827}{27.916}=)$ 0.8894 of the net indicated horses-power developed by the engines. In the "2d trial" the dynamometrical horses-power is $(\frac{1.255}{1.396}=)0.8990$.

The thrusts of the screw, per dynamometer, in the two trials, compare respectively as $(\frac{1093.5}{154.5}=)$ 7.0777 and 1.0000; while the corresponding net pressures on the pistons compare as 7.1533 and 1.0000.

The distribution of the power, calculated as hereinbefore described, will be as follows for the two wharf trials, namely:

Distribution of the power during the 1st trial at the wharf.

	Horses-power.	Per centum.
Gross effective indicated horses-power developed by the engines....	28.486	
Power required to work the engines and shafting, *per se*.....	0.570	
Net power applied to the shaft.....	27.916	or 100.00
Power absorbed by the friction of the load.....	2.094	or 7.50
Power expended in overcoming the cohesive resistance of the water by the screw-blades.....	0.878	or 3.14
Power expended in the displacement of the water by the screw....	24.944	or 89.36
Totals.....	27.916	or 100.00

The power expended in the displacement of the water by the screw, as directly measured by the dynamometer, was 24.827 horses.

Distribution of power during the 2d trial at the wharf.

	Horses-power.	Per centum.
Gross effective indicated horses-power developed by the engines...	1.600	
Power required to work the engines and shafting, *per se*.....	0.204	
Net power applied to the shaft.....	1.396	or 100.00
Power absorbed by the friction of the load.....	0.105	or 7.50
Power expended in overcoming the cohesive resistance of the water by the screw-blades.....	0.040	or 2.86
Power expended in the displacement of the water by the screw....	1.251	or 89.64
Totals.....	1.396	or 100.00

The power expended in the displacement of the water by the screw, as directly measured by the dynamometer, was 1.255 horses.

During the "1st trial" with the vessel stationary at the wharf, the screw made 99.3 revolutions per minute, with a net pressure of 98 pounds per square inch of pistons: and when steaming freely at full power, with the same immersion of the screw, and a net pressure of 94.4132 pounds per square inch of pistons, (Table No. 5, line 8, column h,) the screw made 151.0832 revolutions per minute. Increasing the latter number in the ratio of the square roots of the net pressures, we have ($\sqrt{94.4132} : \sqrt{98}. :: 151.0832 :$) 153.9236, the number of revolutions that would have been made with the vessel steam-

ing freely, had the net pressure on the pistons been 98 pounds per square inch. Hence it follows that, *with equal net pressure upon the pistons, the screw will make* $\left(\frac{153.9236}{99.9}=\right)$ 54.08 *per centum more revolutions in equal time when the vessel is steaming freely than when it is held stationary at the wharf.*

Again, it will be seen by examining lines 5 and 8, column c, Table No. 5, that when the vessel is steaming freely with a net pressure upon the pistons of 39.2660 pounds per square inch, the screw makes 97.9321 revolutions per minute. Increasing this net pressure in the ratio of 97.9321^2 to 99.9^2, we have, for 99.9 revolutions of the screw per minute when the vessel is steaming freely, the net pressure of 40.8602 pounds per square inch. Hence it appears that, revolution for revolution, there was required when the vessel was stationary at the wharf $\left(\frac{98.0000-40.8602 \times 100}{40.8602}=\right)$ 139.84 per centum more pressure to turn the screw than when the vessel was freely under way.

Of course the above two determinations only apply rigorously for the speeds of vessel at which they are made. The results show an enormously greater proportional resistance of the screw when the vessel is stationary at the wharf than when steaming freely under way than is found in the case of large screw-steamers having considerable *length*, and doubtless arises from the fact that when the launch—a small and very *short* vessel—was steaming freely under way, the water did not reach the screw as solidly as it does in the case of long screw-steamers, while, when steaming at the wharf, the difference in this particular was very greatly less.

Table No. 8, containing the data and results of the trials made on the 17th of February, 1870, of the machinery of steam-launch No. 4, with screw G, the vessel being secured to the wharf of the Mare Island navy-yard, California.

	First trial.	Second trial.
TOTALS.		
Duration of the trial in minutes	30.	30.
Number of double strokes of engines' pistons and of revolutions of the screw.	2,997.	1,072.
TEMPERATURES.		
Temperature, in degrees Fahrenheit, of the external atmosphere	54.	59.
Temperature, in degrees Fahrenheit, of the water in the bay	52.	53.
Temperature, in degrees Fahrenheit, of the engine-room	80.	83.
ENGINES.		
Number of double strokes made per minute by the engines' pistons	99.900	35.733
Steam-pressure in the boiler, in pounds per square inch above the atmosphere.	107.	19.
Position of the throttle-valve	Wide open.	Wide open.
Fraction of the stroke of the pistons completed when the steam was cut off	0.858	0.858
Thrust of the screw, in pounds, per dynamometer	1,093.5	154.5
Height of the barometer, in inches of mercury	29.85	29.84
STEAM-PRESSURES IN CYLINDERS PER INDICATOR.		
In pounds per square inch above zero at commencement of stroke of pistons.	119.0	32.1
In pounds per square inch above zero at point of cutting off the steam	112.3	30.1
In pounds per square inch above zero at end of stroke of pistons	93.7	26.5
In pounds per square inch above zero against the pistons during their stroke.	18.4	16.1
Mean gross effective pressure on pistons, in pounds per square inch	100.0	15.7
Mean total pressure on pistons, in pounds per square inch	118.4	31.8
Mean net pressure on pistons, in pounds per square inch	98.0	13.7
POWER.		
Gross effective indicated horses-power developed by the engines	28.486	1.600
Total horses-power developed by the engines	33.728	3.240
Net horses-power developed by the engines	27.916	1.306
Dynamometrical horses-power developed by the engines	24.827	1.255

Trial of the machinery of the United States steam-launch No. 4, made on the 30th of March, 1870, with screw G, the vessel being secured to the wharf of the Mare Island navy-yard, California, and having its stern raised six inches and held suspended by a floating crane.

This experiment, the data and results of which will be found in the following table, No. 9, was made with the vessel secured to the wharf of the Mare Island navy-yard in such a way that the keel was at right angles to the current. The stern of the vessel was raised six inches and held suspended by a floating crane, which, in common with

the vessel, rose and fell with the tide. The object of thus suspending the stern of the vessel above the level at which it floated when resting in the water with its screw not in action, was to enable the engines to make a greater number of double strokes of pistons with the same piston-pressure, in a given time, than they would have done without such suspension; in fact, to make nearly the same number per minute they would have done with the vessel in free motion and the same piston-pressure.

The principal objects of the experiments were:

1. To ascertain the rate of combustion of anthracite in the furnace under the experimental conditions.

2. To ascertain the economic vaporization by the boiler with anthracite at this rate of combustion.

3. To ascertain the indicated and dynamometrical horses-power developed by the engines.

4. To ascertain the cost of the indicated and of the dynamometrical horses-power, in pounds of anthracite, in pounds of the combustible portion of the anthracite—that is, of the portion which remains after deducting the refuse in ash, clinker, &c.—and in pounds of feed-water consumed per hour.

5. To ascertain the condensation of steam in the cylinders.

In making the experiment, the same indicators and dynamometer were used as were employed throughout all these experiments. The anthracite was carefully weighed on the wharf and delivered into the fire-room as fast as consumed. The refuse from it in ash, clinker, &c., was collected and weighed in the dry state at the end of the trial, and on the same scales as the anthracite. The feed-water was accurately measured in an iron tank placed on the wharf. From this tank the water was delivered through a hose into a smaller tank on board the vessel, from which it was pumped into the boiler by the feed-pump of the engines. In passing from the last tank to the boiler the feed-water traversed the "heater" and had its temperature raised by the exhaust steam of the engines. The feed-water was rain-water.

The temperatures of the external atmosphere, of the engine and boiler room, of the water in the bay, of the feed-water in the tank and when it entered the boiler, were taken every fifteen minutes, by the usual mercurial thermometers. At the same intervals there were noted the steam-pressure in the boiler and the height of the barometer. The throttle-valve was kept wide open, and the point of cutting off the steam remained constant during the trial. The number of double strokes made by the engines' pistons was taken by a counter.

An indicator-diagram was taken every fifteen minutes from each end of each cylinder. The diagrams from the dynamometer were practically continuous.

All the observations were recorded, at fifteen minutes intervals, in a tabular record.

In commencing the experiment, the engines were operated several hours to bring them into proper adjustment, and the fires to steady action. The latter were then thoroughly cleaned and made about six inches thick, the height of the water in the boiler glass gauge marked, the steam-pressure in the boiler, and the time noted, and the experiment held to commence. At its end, the fires were again thoroughly cleaned, and left of the same thickness as at the commencement, with the water at the same level in the boiler, and having the same steam-pressure upon it.

RESULTS.

The maximum rate of combustion that could be sustained was 24.655 pounds of anthracite per hour per square foot of grate-surface, with a blast up the chimney given by the exhaust of the two cylinders working at right angles to each other, and having a steam-pressure at the end of the stroke of the pistons of 66.8 pounds per square inch above the atmosphere. The number of exhaustions made per minute was 472. The per centum of this anthracite in refuse being 16.23, there were consumed of its remaining or combustible portion, 20.653 pounds per hour per square foot of grate-surface. To have sustained this rate of combustion with natural draught would have required a chimney 60 feet high above the level of the grate.

The economic vaporization for this fuel and rate of combustion, and for the type and proportion of boiler, was very high, being 9.687 pounds of water vaporized by one pound of the combustible portion of the anthracite from the temperature of 212 degrees Fahrenheit, and under the standard atmospheric pressure of 29.92 inches of mercury.

The condensation of steam in the cylinders, other than that due to the development of the power, was 31.76 per centum of the weight of steam generated in the boiler. This large per centum is due to the small size of the cylinders. With large cylinders, working without a condenser, and with the same low measure of expansion—the steam not being cut off until 0.858 of the stroke of the pistons was completed—the condensation, other than that due to the development of the power, would not have exceeded one-tenth what it proved to be with these small cylinders. Nothing could more strikingly show the necessity for using highly superheated steam with small cylinders. The pistons and valves of these were perfectly tight, and the cylinders and steam-pipes were well protected from radiation.

The distribution of the gross effective indicated power developed by the engines, calculated in the manner hereinbefore explained, is as follows, namely:

	Horses-power.	Per centum.
Gross effective indicated horses-power developed by the engine	27.221	
Power required to work the engines and shafting *per se*	0.673	
Net power applied to the shaft	26.548 or	100.00
Power absorbed by the friction of the load	1.991 or	7.50
Power expended in overcoming the cohesive resistance of the water by the screw-blades	1.455 or	5.48
Power expended in the displacement of the water by the screw	23.102 or	87.02
Totals	26.548 or	100.00

From the above calculation, it appears that the power expended in the displacement of the water by the screw working with the vessel secured to the wharf, or, what is the same thing, the dynamometrical power by calculation, was 23.102 horses. This power, as directly measured by the dynamometer, was 23.025 horses, or sensibly the same.

During the trial, the force of the blast in the chimney was ascertained by direct measurement. An iron pipe of small diameter was placed immediately over the blast-nozzle, and half an inch above it. This pipe extended vertically to the top of the chimney, over the edge of which it was bent and brought down to a convenient distance, where it was joined to an inverted glass siphon containing mercury. The pressure of the blast in one leg of the siphon forced the mercury up the other leg, and the height of the mercurial column from the mercury-level in one leg to that in the other leg measured it. The mean of a great many observations showed that when the steam-pressure in the boiler was 102 pounds per square inch above the atmosphere, the height of the column was 6.6 inches, equivalent to a pressure of 3.24 pounds per square inch.

Table No. 9, containing the data and results of an experiment made with the machinery of the United States steam-launch No. 4, with screw G, to ascertain the evaporative efficiency of the boiler with anthracite, and the cost of the indicated and dynamometrical horse-power in pounds' weight of steam and of fuel consumed per hour. (During this experiment the vessel was secured to the wharf of the Mare Island navy-yard, California, with the stern raised six inches and held suspended by a floating crane.)

Date of commencing the experiment	9.23 a. m., March 30, 1870.
VESSEL.	
Vessel's draught of water, in feet and inches: forward	3 7
mean	3 11½
aft	4 4
TOTAL QUANTITIES.	
Duration of the experiment, in consecutive hours and minutes	9.18
Number of double strokes of engines' pistons, and of revolutions of the screw	65,844.
Number of pounds of anthracite consumed	1,910.
Number of pounds of refuse from the anthracite in ash, clinker, &c	310
Number of pounds of combustible consumed	1,600.
Per centum of the anthracite in refuse of ash, clinker, &c	16.23
Cubic feet of feed-water pumped into the boiler from the tank	220.212
Pounds of feed-water pumped into the boiler from the tank	13,728.439
RATE OF COMBUSTION.	
Pounds of anthracite consumed per hour	205.376
Pounds of combustible consumed per hour	172.043
Pounds of anthracite consumed per hour per square foot of grate-surface	24.655
Pounds of combustible consumed per hour per square foot of grate-surface	20.653
Pounds of combustible consumed per hour per square foot of heating-surface	0.927
TEMPERATURES.	
Temperature, in degrees Fahrenheit, of the external atmosphere	61
Temperature, in degrees Fahrenheit, of the engine and boiler-room	88.
Temperature, in degrees Fahrenheit, of the bay water	60.
Temperature, in degrees Fahrenheit, of the feed-water in the tank	58.
Temperature, in degrees Fahrenheit, of the feed-water entering the boiler	125.

ENGINES.	
Number of double strokes made per minute by the engines' pistons	118.
Steam-pressure in boilers in pounds per square inch above the atmosphere	92.
Position of the throttle-valve	Wide open.
Fraction of the stroke of the piston completed when the steam was cut off	0. [illegible]
Thrust of the screw in pounds, per dynamometer	858. 55
Height of the barometer in inches of mercury	29. 38
STEAM-PRESSURES IN CYLINDERS, PER INDICATOR.	
In pounds per square inch above zero at commencement of stroke of pistons	104. 2
In pounds per square inch above zero at point of cutting off the steam	98. 7
In pounds per square inch above zero at end of stroke of pistons	81. 2
In pounds per square inch above zero against the pistons during their stroke	21. 1
Mean gross effective pressure on pistons, in pounds per square inch	80. 9
Mean total pressure on pistons, in pounds per square inch	102. 0
Mean net pressure on pistons, in pounds per square inch	78. 9
POWER.	
Absolute:	
Gross effective indicated horses-power developed by the engines	27. 221
Total horses-power developed by the engines	34. 390
Net horses-power developed by the engines	26. 548
Dynamometrical horses-power developed by the engines	23. 025
Economic:	
Pounds of anthracite consumed per hour per gross effective indicated horse-power	7. 545
Pounds of anthracite consumed per hour per total horse-power	5. 984
Pounds of anthracite consumed per hour per net horse-power	7. 736
Pounds of anthracite consumed per hour per dynamometrical horse-power	8. 930
Pounds of combustible consumed per hour per gross effective indicated horse-power	6. 390
Pounds of combustible consumed per hour per total horse-power	5. 014
Pounds of combustible consumed per hour per net horse-power	6. 480
Pounds of combustible consumed per hour per dynamometrical horse-power	7 479
Pounds of feed-water consumed per hour per gross-effective horse-power	54. 229
Pounds of feed-water consumed per hour per total horse-power	43. 012
Pounds of feed-water consumed per hour per net horse-power	55. 604
Pounds of feed-water consumed per hour per dynamometrical horse-power	64. 112
VAPORIZATION.	
Total:	
Total number of pounds of water that would have been vaporized in the boiler, had it been supplied at the temperature of 100 degrees Fahrenheit and vaporized under the atmospheric pressure of 29.92 inches of mercury	13, 876. 90[illegible]
Total number of pounds of water that would have been vaporized in the boiler, had it been supplied at the temperature of 212 degrees Farenheit and vaporized under the atmospheric pressure of 29.92 inches of mercury	15, 499. 25[illegible]
Economic:	
Pounds of water vaporized from 100° Fahrenheit by one pound of anthracite	7. 365
Pounds of water vaporized from 100° Fahrenheit by one pound of combustible	8. 673
Pounds of water vaporized from 212° Fahrenheit by one pound of anthracite	8. 115
Pounds of water vaporized from 212° Fahrenheit by one pound of combustible	9. 6[illegible]7
CONDENSATION.	
Pounds of steam discharged from the cylinders into the atmosphere, calculated from the pressure of the steam at the end of the stroke of the pistons	8, 452. 0[illegible]
Pounds of steam condensed in the boiler and cylinders to furnish the heat transmuted into the total power developed by the engines, according to Joule's equivalent	930. 69[illegible]
Sum of the above two quantities	9, 382. 7[illegible]
Per centum of the steam evaporated in the boiler, condensed in the boiler and cylinders to furnish the heat transmuted into the total power developed by the engines	6. 78
Per centum of the steam evaporated in the boiler not accounted for by the indicator	31. 65
Difference, due to all causes, between the weight of feed-water pumped into the boiler, according to the tank, and the weight of steam discharged from the cylinders into the atmosphere at the end of the stroke of the pistons, per indicator, expressed in per centum of the feed-water	38. 43

Very respectfully, your obedient servant,
B. F. ISHERWOOD.
Chief Engineer.

To Engineer-in-Chief WM. W. W. WOOD, U. S. N.,
Chief of the Bureau of Steam Engineering, Navy Department.

NOVEMBER 16, 1874.

Experiments made to ascertain the dynamometrical resistances to dragging of the experimental screws A, B, C, D, E, F, and H, of the United States steam-launch No. 4, when it was towed by the United States screw-steamer Monterey, with its screws disconnected from its engines, and revolving freely by the pressure of the water on the forward side of their blades, and held stationary in different positions.

The following experiments are the only ones of their kind of which the writer has knowledge. They supply, in part, a great desideratum in marine steam-engineering, and show the loss of speed sustained by a steamship when under sail alone, consequent on the dragging of its screw through the water in different stationary positions, and when revolving freely by the pressure of the water on the forward surface of their blades. They also show the comparative resistances of screws of different kinds, with different proportions and number of blades, under the above conditions.

The screws employed in these experiments were screws A, B, C, D, E, F, and H, of the United States steam-launch No. 4, embracing all, with the exception of screw G, that were used in the experiments made with that launch and detailed in the immediately preceding report.

During the experiments about to be described, the launch was at a less draught of water than during those referred to, and had the following dimensions and proportions in the water:

Length, in feet, on load water-line, from forward edge of rabbet of stem to after side of stern-post		54.40
Extreme breadth, in feet, on load water-line		11.88
Depth, in feet, of hull from load water-line to lower edge of rabbet of keel	forward.	2.160
	mean ...	2.891
	aft.....	3.622
Load-draught, in feet, of water from the bottom of the keel	forward.	2.66
	mean ...	3.62
	aft.....	4.58
Area, in square feet, of the greatest immersed transverse section		21.83
Area, in square feet, of the immersed external surface of the hull proper, exclusive of keel and rudder		571.
Area, in square feet, of the immersed external surface of the hull, inclusive of keel (100.8 square feet) and rudder, (13.2 square feet)		685.
Displacement, (cubic feet)		693.117
Displacement, (tons)		19.842
Ratio of the area of the greatest immersed transverse section to the area of its circumscribing parallelogram		0.6356
Ratio of the displacement to its circumscribing parallelopipedon		0.3710

The remaining dimensions of the launch can be obtained from the immediately preceding report. Its hull, during the experiments about to be described, had 0.265 foot draught of water less than during the experiments on the propelling efficiency of the screws, with, of course, a corresponding decrease in the area of the greatest immersed transverse section, in the area of the immersed external surface, and in the displacement. The greatest immersed transverse section and the immersed solid of the hull were also sharper than with the greater draught of water. The resistance of the hull must, therefore, have been less. It was in fact $\left(\frac{707-631\times100}{707}=\right)$ 10¼ per centum less at the speed of seven geographical miles per hour, as measured by the dynamometer.

MANNER OF MAKING THE EXPERIMENTS.

The screw-steamer Monterey, by which the steam-launch No. 4 was towed, is a small tug attached to the Mare Island navy-yard. On the deck of this vessel, at the stern, the bed-plate of a very sensitive dynamometer was bolted, consisting of a single horizontal lever, one end of which bore against a vertical steel knife-edge, by means of a steel bush, the knife-edge being firmly secured to the bed-plate. The other end was articulated to a spiral spring, the opposite extremity of which, in its turn, was also articulated to the bed-plate. At one-tenth of the distance between the points at which the lever was secured to the bed-plate, measured from the end opposite that to which the spring was attached, was a vertical steel knife-edge bearing against a steel bush. To the extremities of this knife-edge a small steel loop, U-shaped, was articulated, and to this loop the tow-line from the steam-launch was fastened. The leverage of the spring against the tow-line was exactly ten to one. The weight of the lever was supported on delicate brass friction-rollers, polished, and moving on polished brass ways. Great precaution was thus used to make the friction of the dynamometer as little as possible, and it was reduced to the extent that one-fourth of a pound tension on the spring was sufficient to give movement to the unloaded instrument.

A scale, graduated to pounds by careful trial for its whole length, was attached to the base-plate of the spring, and the opposite end of the spring carried a pencil, which traced on a moving sheet of paper the curve of tensions described by the combined movement of the pencil and paper, and measured by the scale. The paper was wound around a light polished brass cylinder of eight inches diameter, the steel axle of which, at each end, was supported in brass bearings secured to the bed-plate of the dynamometer. This cylinder received a rotary movement from the screw-shaft of the vessel by means of two shafts at right angles to each other, the first being horizontal and lying just above the deck, the second being vertical and connecting the first, by my means of miter-gearing, with the screw-shaft. The vertical shaft received its movement from the screw-shaft by means of an endless worm and wheel, and the cylinder received its movement from the horizontal shaft by similar mechanism. The dynamometer-diagram, thus traced, was sufficiently long for a single run of the vessel, so that it was continuous from one end of the base to the other.

The base used was the one employed in the previous experiments on the propelling efficiencies of the screws of steam-launch No. 4, already referred to. It was a straight line 8,950 feet long, in smooth water, and under the lee of the high ground of Mare Island.

The tow-line was a small cord, just strong enough to sustain the maximum tension without breaking, and 170 feet in length between the vessels. It was attached, by means of a bridle, to the bows of the launch about 18 inches above the deck, so that the towing strain was exactly in the vertical plane of the keel. The screw of the Monterey had but a very small slip when towing the launch, so that any water thus thrown backward lost its movement within a very short distance and exercised no effect upon the following launch. The strain on the dynamometer exerted by the tow-line alone, at different angles of inclination from the vertical, was experimentally ascertained and deducted from the strain on the dynamometer when towing the launch with the same angle of inclination of the tow-line.

Throughout these experiments both vessels remained at exactly the same draught of water, and during each trial the steam-pressure in the Monterey's boiler, the position of the throttle-valve of its engine, and all other conditions, were maintained as nearly constant as possible.

The speed of the launch was ascertained both by the shore-marks and by the Berthon tube, in the same manner as described by the preceding experiments on the propelling efficiency of the screws. The number of revolutions made by the screws, when revolving freely by the pressure of the water on the forward surface of their blades, was ascertained by a counter, in the manner described for the experiments already referred to. The same persons were employed in both sets of experiments, and were perfectly expert in making them. Nothing that could conduce to extreme accuracy was omitted. During these trials, the screw-shaft was disconnected from the crank-shaft of the launch's engines, so that in revolving it had only the friction of its journals and collars to overcome. Its stuffing-box, at the inboard end of the dead-wood, was packed barely sufficiently tight to prevent water-leakage.

The mean tension on the tow-line was obtained by dividing the straight base of each dynamometer-diagram into abscissæ of half an inch length, and erecting therefrom ordinates at right angles to the base, and cutting the curve of tensions. The mean length of these ordinates, measured by the scale of the spring, and multiplied by the leverage of the latter, gives the mean tension on the tow-line. The base-line of the diagram is described by revolving the cylinder without tension on the spring.

Each trial consisted of six runs over the base, three in each direction, and were made with the screws in the following positions, namely:

First. With screw A, 11 inches long in the direction of the axis, two-bladed, and of 5.136 feet pitch, six runs were made with the blades in a vertical position immediately behind the stern-post of the vessel, the latter having the speed of seven geographical miles per hour, as nearly as could be obtained. Then six runs were made with the blades at right angles to their former position—that is, horizontally or square across the vessel—at as nearly the speed of seven geographical miles per hour as could be obtained. Finally, the screw being allowed to freely revolve, six runs were made at the speed of seven geographical miles per hour, as nearly as could be obtained; after which six runs were made at each of the speeds of 6½, 6, and 5½ geographical miles per hour, as nearly as could be obtained.

Second. With screw B, which was exactly the same as screw A, except that its length was 8⅝ inches in the direction of the axis instead of 11 inches, precisely the same set of trials was made as with screw A.

Third. With screw C, which was exactly the same as screw A, except that its length was 5½ inches in the direction of the axis, precisely the same set of trials was made as with screw A.

Fourth. With screw D, which was exactly the same as screw A, except that its length was 3⅛ inches in the direction of the axis, precisely the same set of trials was made as with screw A.

Fifth. With screw E, which was composed of four blades equispaced around the axis, the length of each blade in the direction of the axis being 5½ inches, and the pitch, surface, and diameter the same as those of screw A, six runs were made with two blades in the vertical position immediately behind the stern-post of the vessel, and the other two blades in the horizontal position or square across the vessel, the vessel's speed being 7 geographical miles per hour, as nearly as could be obtained. Then six runs were made with the blades of the screw standing at the angle of 45 degrees with the horizon, the speed of the vessel being 7 geographical miles per hour, as nearly as could be obtained. Finally, the screw being allowed to revolve freely, six runs were made at the speed of 7 geographical miles per hour, as nearly as could be obtained; after which six runs were made at each of the speeds of 6½, 6, and 5½ geographical miles per hour, as nearly as could be obtained.

6th. With screw F, which was 11 inches long in the direction of its axis, and composed of four blades arranged in two pairs—the blades of each pair being directly opposite each other—and one pair placed immediately behind the other, so that when viewed in projection on a plane at right angles to the axis, the screw appeared to be two-bladed, six runs were made with the blades in a vertical position immediately behind the stern-post of the vessel, the latter having the speed of 7 geographical miles per hour as nearly as could be obtained. Then six runs were made with the blades at right angles to their former position—that is, horizontally or square across the vessel—at as nearly the speed of 7 geographical miles as could be obtained. Finally, the screw being allowed to revolve freely, six runs were made at the speed of 7 geographical miles per hour as nearly as could be obtained; after which six runs were made at each of the speeds of 6½, 6, and 5½ geographical miles per hour, as nearly as could be obtained. Screw F is also known as the Mangin or duplex screw; and its pitch, surface, and diameter, were the same as those of screw A.

7th. With screw H, which was a three-bladed Griffith screw of 11 inches extreme length, and a pitch that expanded from 6¾ feet to 7¼ feet, the diameter being the same as that of screw A, six runs were made with one blade vertical *below* the shaft—that is, immediately behind the stern-post of the vessel—and the remaining two blades *above* the shaft at angles of 60 degrees from the vertical, the vessel's speed being 7 geographical miles per hour as nearly as could be obtained. Then six runs were made with one blade vertical *above* the shaft—that is, immediately behind the stern-post of the vessel—and the remaining two blades *below* the shaft at angles of 60 degrees from the vertical, the vessel's speed being 7 geographical miles per hour as nearly as could be obtained. Then, six runs were made with one blade horizontal—that is, square across the vessel on one side of the stern-post—and the remaining two blades on the other side of the stern-post at angles of 60 degrees from the vertical. Finally, the screw being allowed to revolve freely, six runs were made at the speed of 7 geograp ical miles per hour as nearly as could be obtained; after which six runs were made at each of the speeds of 6½, 6, and 5½ geographical miles per hour, as nearly as could be obtained.

RESULTS.

Of the resistance of the hull, per se, that is, its resistance without any screw attached.—Steam-launch No. 4 was towed at all speeds from 5½ to 7½ geographical miles per hour, as nearly as could be obtained, increasing by one-fourth of a geographical mile per hour. Six runs were made at each speed, and the mean taken of the experimental speeds and of the corresponding dynamometer-diagrams. A comparison of these means with each other showed that, within the above limits, the resistance of the hull was in the ratio of the square of its speed; the extreme variation from this law on either side of the mean being only 2 per centum of the mean, and was as often greatest for the low speeds as for the high. *At the speed of 7 geographical miles per hour the resistance of the hull, as given by the mean of all the dynamometer-diagrams taken at all the different speeds, and reduced in the above proportion, is* 631 *pounds.*

When the steam-launch, instead of being towed, was propelled by its own screws, the resistance of its hull at the speed of 7 geographical miles per hour was 707 pounds; the difference in the two cases is consequently (707 − 631 =) 76 pounds, or $\left(\frac{76\times 100}{707}=\right)$ 10¾ per centum of the larger quantity. A part of this is due to the vessel's less draught of water when it was towed than when it was propelled by its own screws. In the former case its greatest immersed transverse section was 21.83 square feet; in the latter case 24.98 square feet; difference, $\left(\frac{24.98-21.83\times 100}{24.98}=\right)$ 12.61 per centum of the larger quantity. In the former case the area of the immersed external surface of the hull was 717 square feet; in the latter case 685 square feet; difference, $\left(\frac{717-685+100}{717}=\right)$

4.46 per centum of the larger quantity. In the former case the displacement was 23.3053 tons; in the latter case, 19.8420 tons; difference, $\left(\frac{23.3053-19.8420\times100}{23.3053}=\right)$ 14.86 per centum of the larger quantity. The mean of the three $\left(\frac{12.61+4.46+14.86}{3}=\right)$ 10.64 per centum, is almost the exact experimental difference of the resistance in the two cases.

Results with screw D.—This screw was two-bladed, and had the least surface of any employed in these trials; it is therefore convenient to first ascertain its results. The principal portion of its projected area on a plane at right angles to the axis is nearly masked or covered by the stern-post of the vessel when the two blades are placed vertically behind it.

With the blades of screw D held stationary in the vertical position, immediately behind the stern-post of the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 657 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 26 pounds. Consequently, the screw, with its blades in the vertical position, increased the vessel's resistance $\left(\frac{26\times100}{631}=\right)$ 4.12 per centum, and decreased its speed ($\sqrt{631}:\sqrt{657}::7:7.1428$; and $7.1428-7.=$) 0.1428 geographical miles per hour, or $\left(\frac{0.1428\times100}{7.1428}=\right)$ 2 per centum.

With the blades of screw D held stationary in the horizontal position, square across the vessel, the aggregate resistance of the vessel and screw, at the speed of 7 geographical miles per hour, was 756 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remains for the resistance of the screw, *per se*, 125 pounds. Consequently, the screw, with its blades in the horizontal position, increased the vessel's resistance $\left(\frac{125\times100}{631}=\right)$ 19.81 per centum, and decreased its speed ($\sqrt{631}:\sqrt{756}::7:7.6620$; and $7.6620-7.=$) 0.6620 geographical miles per hour, or $\left(\frac{0.6620\times100}{7.6620}=\right)$ 8.64 per centum.

From the above it appears that screw D, when its blades were held in the horizontal position, square across the vessel, had $\left(\frac{125}{26}=\right)$ 4.808 times the resistance it had when its blades were held in the vertical position, immediately behind the vessel's stern-post.

When screw D was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 757 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from 5½ to 7 geographical miles per hour. The axial speed of the screw was consequently $\left(\frac{6086-5.136\times757\times100}{6086}=\right)$ 36.12 per centum less than the speed of the vessel, and when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 2.528 geographical miles per hour. The revolutions of this screw were not uniform; the rotary speed fell off greatly as the blades came into the vertical position behind the stern-post of the vessel, at which point there was a decided hesitation in passing, after which the rotary speed increased. That speed appeared uniform for a considerable portion of the half revolution, the falling off occurring as the blades became masked by the stern-post, owing to their excessive narrowness in projection on a plane at right angles to their axis.

With the vessel at the speed of seven geographical miles per hour, and screw D revolving freely, the aggregate resistance of vessel and screw was 685 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 54 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance $\left(\frac{54\times100}{631}=\right)$ 8.56 per centum; and decreased its speed ($\sqrt{631}:\sqrt{685}::7:7.2934$; and $7.2934-7.=$) 0.2934 geographical mile per hour, or $\left(\frac{0.2934\times100}{7.2934}=\right)$ 4.02 per centum.

When a two-bladed screw has so small a fraction of the pitch as screw D, namely, 0.1014, whereby its blades are nearly masked by the vessel's stern-post, it appears that the resistance due to the screw when revolving freely is 2 per centum of the resistance of the vessel, *per se*, more than when it is held stationary with its blades behind the stern-post in the vertical position; but 3 per centum less than when it is held stationary with its blades in the horizontal position, square across the vessel. The resistance

of the revolving screw in this case is greater, proportionally, than when a larger fraction of the screw is used, owing to its making a less number of revolutions per mile in consequence of the falling off of its rotary speed as its blades pass the stern-post.

Results with screw C.—This screw was two-bladed, and had the next greatest surface to screw D. Their surfaces compared as 3½ to 5½, and were of exactly the same kind. A considerable portion of the surface of screw C projected on each side of the vessel's stern-post when the blades were in the vertical position.

With the blades of screw C held stationary in the vertical position, immediately behind the stern-post of the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 721 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 90 pounds. Consequently, the screw, with its blades in the vertical position, increased the vessel's resistance $\left(\frac{90 \times 100}{631} =\right)$ 14.26 per centum; and decreased the speed ($\sqrt{631} : \sqrt{721} :: 7 : 7.4826$; and $7.4826 - 7. =$) 0.4826 geographical miles per hour, or $\left(\frac{0.4826 \times 100}{7.4826} =\right)$ 6.45 per centum.

With the blades of screw C held stationary in the horizontal position, square across the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 851 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remains for the resistance of the screw, *per se*, 220 pounds. Consequently, the screw with its blades in the horizontal position, increased the vessel's resistance $\left(\frac{220 \times 100}{631} =\right)$ 34.86 per centum; and decreased its speed ($\sqrt{631} : \sqrt{851} :: 7 : 8.1292$; and $8.1292 - 7. =$) 1.1292 geographical miles per hour, or $\left(\frac{1.1292 \times 100}{8.1292} =\right)$ 13.89 per centum.

From the above, it appears that screw C, when its blades were held in the horizontal position, square across the vessel, had $\left(\frac{220}{90} =\right)$ 2.444 times the resistance it had when its blades were held in the vertical position, immediately behind the vessel's stern-post.

When screw C was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 921 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from 5½ to 7 geographical miles per hour. The axial speed of the screw was consequently $\left(\frac{6086 - 5.136 \times 921 \times 100}{6086} =\right)$ 22.28 per centum less than the speed of the vessel, and when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 1.559 geographical miles per hour. The revolutions of this screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position behind the stern-post of the vessel.

With the vessel at the speed of 7 geographical miles per hour, and screw C revolving freely, the aggregate resistance of vessel and screw was 698 pound; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw *per se*, 67 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance $\left(\frac{67 \times 100}{631} =\right)$ 10.62 per centum; and decreased its speed ($\sqrt{631} : \sqrt{698} :: 7 : 7.3623$; and $7.3623 - 7. =$) 0.3623 geographical mile per hour, or $\left(\frac{0.3623 \times 100}{7.3623} =\right)$ 4.92 per centum.

From the foregoing it appears that the resistance due to screw C, when revolving freely, is 3.64 per centum of the resistance of the vessel, *per se*, less than where it is held stationary with its blades behind the stern-post in the vertical position; and 24.24 per centum less than when it is held stationary with its blades in the horizontal position, square across the vessel.

Results with screw B.—This screw was two-bladed, and had the next greatest surface to screw C. Their surfaces compared as 5½ to 8⅛, and were of exactly the same kind.

With the blades of screw B held stationary in the vertical position, immediately behind the stern-post of the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 828 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 197 pounds. Consequently, the screw, with its blades in the vertical position, increased the vessel's resistance $\left(\frac{197 \times 100}{631} =\right)$ 31.22 per centum; and decreased its speed ($\sqrt{631} : \sqrt{828} :: 7 : 8.0186$; and $8.0186 - 7. =$) 1.0186 geographical miles per hour, or $\left(\frac{1.0186 \times 100}{8.0186} =\right)$ 12.73 per centum.

With the blades of screw B held stationary in the horizontal position, square across the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 976 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 345 pounds. Consequently, the screw, with its blades in the horizontal position, increased the vessel's resistance $\left(\frac{345 \times 100}{631} =\right)$ 54.68 per centum; and decreased its speed ($\sqrt{631} : \sqrt{976} :: 7 : 8.7058$; and $8.7058 - 7. =$) 1.7058 geographical miles per hour, or $\left(\frac{1.7058 \times 100}{8.7058} =\right)$ 19.59 per centum.

From the above it appears that screw B, when its blades were held in the horizontal position, square across the vessel, had $\left(\frac{345}{197} =\right)$ 1.751 times the resistance it had when its blades were held in the vertical position, immediately behind the vessel's stern-post.

When screw B was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 921 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from 5½ to 7 geographical miles per hour. The axial speed of the screw was consequently $\left(\frac{6086 - 5.136 \times 921 \times 100}{6086} =\right)$ 22.28 per centum less than the speed of the vessel, and when the latter was 7 geographical miles per hour the screw was dragged bodily through the water at the speed of 1.559 geographical miles per hour. The revolutions of this screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position behind the stern-post of the vessel.

With the vessel at the speed of 7 geographical miles per hour, and screw B revolving freely, the aggregate resistance of vessel and screw was 736 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 105 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance $\left(\frac{105 \times 100}{631} =\right)$ 16.64 per centum; and decreased its speed ($\sqrt{631} : \sqrt{736} :: 7 : 7.5600$; and $7.5600 - 7. =$) 0.5600 geographical mile per hour, or $\left(\frac{0.5600 \times 100}{7.5600} =\right)$ 7.41 per centum.

From the foregoing it appears that the resistance due to screw B, when revolving freely, is 14.58 per centum of the resistance of the vessel, *per se*, less than when it is held stationary with its blades behind the stern-post in the vertical position; and 38.04 per centum less than when it is held stationary with its blades in the horizontal position, square across the vessel.

Results with screw A.—This screw was two-bladed, and had exactly double the surface of screw C, the surfaces of both being of exactly the same kind.

With the blades of screw A held stationary in the vertical position, immediately behind the stern-post of the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 981 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 350 pounds. Consequently, the screw, with its blades in the vertical position, increased the vessel's resistance $\left(\frac{350 \times 100}{631} =\right)$ 55.47 per centum; and decreased its speed ($\sqrt{631} : \sqrt{981} :: 7 : 8.7281$; and $8.7281 - 7. =$) 1.7281 geographical miles per hour, or $\left(\frac{1.7281 \times 100}{8.7681} =\right)$ 19.80 per centum.

With the blades of screw A held stationary in the horizontal position, square across the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 1,071 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 440 pounds. Consequently, the screw, with its blades in the horizontal position, increased the vessel's resistance $\left(\frac{440 \times 100}{631} =\right)$ 69.73 per centum; and decreased its speed ($\sqrt{631} : \sqrt{1071} :: 7 : 9.1196$; and $9.1196 - 7. =$) 2.1196 geographical miles per hour, or $\left(\frac{2.1196 \times 100}{9.1196} =\right)$ 23.24 per centum.

From the above it appears that screw A, when its blades were held in the horizontal position, square across the vessel, had $\left(\frac{440}{350} =\right)$ 1.257 times the resistance it had when its blades were held in the vertical position, immediately behind the vessel's stern-post.

When screw A was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 921 revolutions per geographical mile, which num-

ber was not affected by the speed of the vessel, but remained constant for all speeds from 5½ to 7 geographical miles per hour. The axial speed of the screw was consequently $\left(\frac{6086-5.136\times 921\times 100}{6086}=\right)$ 22.28 per centum less than the speed of the vessel, and when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 1.559 geographical miles per hour. The revolutions of this screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position.

With the vessel at the speed of 7 geographical miles per hour, and screw A revolving freely, the aggregate resistance of vessel and screw was 765 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 134 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance $\left(\frac{134\times 100}{631}=\right)$ 21.24 per centum; and decreased its speed ($\sqrt{631}:\sqrt{765}::7:7.7075$; and 7.7075—7.=) 0.7075 geographical mile per hour, or $\left(\frac{0.7075\times 100}{7.7075}=\right)$ 9.18 per centum.

From the foregoing it appears that the resistance due to screw A, when revolving freely, is 34.23 per centum of the resistance of the vessel, *per se*, less than when it is held stationary with its blades behind the stern-post in the vertical position; and 48.49 per centum less than when it is held stationary with its blades in the horizontal position, square across the vessel.

Results with screw E.—This screw was four-bladed, with the blades equispaced around the axis. Each blade was exactly the same as one of the blades of screw C, so that screw E had the same kind of surface as screw C, and just double the quantity.

With screw E held stationary in such position that two of its blades were vertical and immediately behind the stern-post of the vessel, the other two being horizontal and square across the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 941 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, 310 pounds. Consequently, the screw, with its blades in the above position, increased the vessel's resistance $\left(\frac{310\times 100}{631}=\right)$ 49.13 per centum; and decreased its speed ($\sqrt{631}:\sqrt{941}::7:8.5483$; and 8.5483—7=) 1.5483 geographical miles per hour, or $\left(\frac{1.5483\times 100}{8.5483}=\right)$ 18.11 per centum.

With screw E held stationary in such position that all its blades stand at the angle of 45 degrees with the horizon, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 968 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 337 pounds. Consequently, the screw, with its blades in the above position, increased the vessel's resistance $\left(\frac{134\times 100}{631}=\right)$ 22.24 per centum; and decreased its speed ($\sqrt{631}:\sqrt{968}::7:8.6696$; and 8.6696—7=) 1.6696 geographical miles per hour, or $\left(\frac{1.6696\times 100}{8.6696}=\right)$ 19.26 per centum.

From the above it appears that screw E, when its blades were held at the angle of 45 degrees with the horizon, had $\left(\frac{337}{310}=\right)$ 1.087 times the resistance it had when two of its blades were held in the vertical position immediately behind the vessel's stern-post and the remaining two blades in the horizontal position square across the vessel.

When screw E was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 921 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from 5½ to 7 geographical miles per hour. The axial speed of the screw was consequently $\left(\frac{6086-5.136\times 921\times 100}{6086}=\right)$ 22.28 per centum less than the speed of the vessel; and when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 1.559 geographical miles per hour. The revolutions of this screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position behind the stern-post of the vessel.

With the vessel at the speed of 7 geographical miles per hour, and screw E revolving freely, the aggregate resistance of vessel and screw was 765 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resist-

ance of the screw, *per se*, 134 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance $\left(\frac{134 \times 100}{631} =\right)$ 21.24 per centum and decreased its speed ($\sqrt{631} : \sqrt{765} :: 7 : 7.7075$; and $7.7075 - 7. =$) 0.7075 geographical mile per hour, or $\left(\frac{0.7075 \times 100}{7.7075} =\right)$ 9.18 per centum.

From the foregoing it appears that the resistance due to screw E, when revolving freely, is 27.89 per centum of the resistance of the vessel, *per se*, less than when it is held stationary with two of its blades in the vertical position behind the vessel's stern-post, and the remaining two in the horizontal position, square across the vessel; and 32.17 per centum less than when it is held stationary with its blades at the angle of 45 degrees with the horizon.

Results with screw F.—This screw (sometimes called the Mangin screw and sometimes the duplex screw) was four-bladed, and consisted of two pairs of blades placed one immediately behind the other, so that when viewed in projection on a plane at right angles to axis, it appeared as a two-bladed screw with the blades directly opposite each other. Each blade was exactly the same as one of the blades of screw C, so that screw F had the same kind of surface as screw C, and just double the quantity.

With the blades of screw F held stationary in the vertical position, immediately behind the stern-post of the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 721 pounds; deducting from which the 631 pounds due to the resistance of the vessel there remains for the resistance of the screw, *per se*, 90 pounds. Consequently, the screw, with its blades in the vertical position, increased the vessel's resistance $\left(\frac{90 \times 100}{631} =\right)$ 14.26 per centum, and decreased its speed ($\sqrt{631} : \sqrt{721} :: 7 : 7.4826$; and $7.4826 - 7. =$) 0.4826 geographical mile, or $\left(\frac{0.4826 \times 100}{7.4826} =\right)$ 6.45 per centum.

With the blades of screw F held stationary in the horizontal position, square across the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 851 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 220 pounds. Consequently, the screw, with its blades in the horizontal position increased the vessel's resistance $\left(\frac{220 \times 100}{631} =\right)$ 34.86 per centum, and decreased its speed ($\sqrt{631} : \sqrt{851} :: 7 : 8.1292$; and $8.1292 - 7 =$) 1.1292 geographical miles per hour, or $\left(\frac{1.1292 \times 100}{8.1292} =\right)$ 13.89 per centum.

From the above it appears that screw F, when its blades were held in the horizontal position, square across the vessel, had $\left(\frac{220}{90} =\right)$ 2.444 times the resistance it had when its blades were held in the vertical position, immediately behind the vessel's stern-post.

When screw F was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 921 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from 5½ to 7 geographical miles per hour. The axial speed of the screw was consequently $\left(\frac{6086 - 5.136 \times 921 \times 100}{6086} =\right)$ 22.28 per centum less than the speed of the vessel, and when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 1.559 geographical miles per hour. The revolutions of this screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position, behind the stern-post of the vessel.

With the vessel at the speed of 7 geographical miles per hour, and screw F revolving freely, the aggregate resistance of vessel and screw was 698 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 67 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance $\left(\frac{67 \times 100}{631} =\right)$ 10.62 per centum; and decreased its speed ($\sqrt{631} : \sqrt{698} :: 7 : 7.3623$; and $7.3623 - 7. =$) 0.3623 geographical mile per hour, or $\left(\frac{0.3623 \times 100}{7.3623} =\right)$ 4.92 per centum.

From the foregoing it appears that the resistance due to screw F when revolving freely is 3.64 per centum of the resistance of the vessel, *per se*, less than when it is held stationary with its blades behind the stern-post in the vertical position; and 24.24 per centum less than when it is held stationary with its blades in the horizontal position square across the vessel.

Results with screw H.—This screw has a large globular hub, and three blades cut to the pear-shape, which forms the Griffith screw. It has the same diameter as the previously-described screws, but its pitch is greater and expands gradually from the forward to the after edge of the blades.

With the blades of screw H held stationary in such position that one blade was vertical *below* the shaft and immediately behind the stern-post of the vessel, the remaining two blades being *above* the shaft and at angles of 60 degrees with the perpendicular, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 914 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw *per se*, 283 pounds. Consequently, the screw, with its blades in the above position, increased the vessel's resistance $\left(\frac{283 \times 100}{631} =\right)$ 44.85 per centum; and decreased its speed ($\sqrt{631} : \sqrt{914} :: 7 : 8.4247$; and $8.4247 - 7 =$) 1.4247 geographical miles, or $\left(\frac{1.4247 \times 100}{8.4247} =\right)$ 16.91 per centum.

With the blades of screw H held stationary in such position that one blade was vertical *above* the shaft and immediately behind the stern-post of the vessel, the remaining two blades being *below* the shaft and at angles of 60 degrees with the perpendicular, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 992 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 361 pounds. Consequently, the screw with its blades in the above position, increased the vessel's resistance $\left(\frac{361 \times 100}{631} =\right)$ 57.21 per centum; and decreased its speed ($\sqrt{631} : \sqrt{992} :: 7 : 8.7768$; and $8.7768 - 7 =$) 1.7768 geographical mile, or $\left(\frac{1.7768 \times 100}{8.7768} =\right)$ 20.24 per centum.

With the blades of screw H held stationary in such position that one blade was horizontal, square across the vessel on one side of the stern-post, the remaining two blades being on the opposite side of the stern-post and at angles of 30 degrees with the perpendicular, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 962 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 331 pounds. Consequently, the screw with its blades in the above position, increased the vessel's resistance $\left(\frac{331 \times 100}{631} =\right)$ 52.46 per centum; and decreased its speed ($\sqrt{631} : \sqrt{962} :: 7 : 8.6431$; and $8.6431 - 7 =$) 1.6431 geographical miles, or $\left(\frac{1.6431 \times 100}{8.6431} =\right)$ 19.09 per centum.

From the above it appears that screw H, when one of its blades was held stationary in the vertical position *above* the shaft immediately behind the stern-post of the vessel, had $\left(\frac{361}{283} =\right)$ 1.276 times the resistance it had when its blades were held in exactly the reverse position, that is to say, when one of its blades was vertical *below* the shaft immediately behind the stern-post. When one of the blades was held horizontally, square across the vessel on one side of the stern-post, while the other two blades were on the opposite side at angles of 30 degrees from the perpendicular, the resistance of the screw (331 pounds) was but a little over the mean $\left(\frac{283 \times 361}{2} = 322 \text{ pounds}\right)$ of its resistances with one blade vertical alternately above and below the shaft.

When screw H was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 665 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from 5½ to 7 geographical miles per hour. The axial speed (for mean pitch) of the screw was consequently $\left(\frac{6086 - 7 \times 665 \times 100}{6086} =\right)$ 23.51 per centum less than the speed of the vessel, and when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 1.6459 geographical miles per hour. The revolutions of the screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position behind the stern-post of the vessel.

With the vessel at the speed of 7 geographical miles per hour, and screw H revolving freely, the aggregate resistance of vessel and screw was 756 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 125 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance $\left(\frac{125 \times 100}{631} =\right)$ 19.81 per centum; and decreased its speed ($\sqrt{631} : \sqrt{756} :: 7 : 7.6620$; and $7.6620 - 7. =$) 0.6620 geographical mile per hour, or $\left(\frac{0.6620 \times 100}{7.6620} =\right)$ 8.64 per centum.

From the foregoing it appears that the resistance due to screw H when revolving freely, is 25.04 per centum of the resistance of the vessel, *per se*, less than when it is held stationary with one blade vertical *below* the shaft, immediately behind the vessel's stern-post; 37.40 per centum less than when it is held stationary with one blade vertical *above* the shaft, immediately behind the stern-post; and 32.65 per centum less than when it is held stationary with one blade horizontal, square across the vessel, on one side of the stern-post, while the remaining two blades are on the opposite side at angles of 30 degrees from the perpendicular.

General conclusions.—From the results of the preceding experiments made to determine the relative resistances of the screws of steam-launch No. 4 when dragged through the water in various positions and under different conditions, the following general conclusions can be drawn:

1st. All the screws experimented with continued to revolve until the vessel's speed fell below 3½ geographical miles per hour.

2d. That with the exception of the extreme case in which a two-bladed screw is employed, composed of such small fraction of the pitch that its projected area on a plane at right angles to the axis is covered or masked by the stern-post of the vessel, the two-bladed screws gave much less resistance when revolving freely than when held stationary with their blades in the vertical position immediately behind the stern-post of the vessel.

3d. That even in the extreme case above excepted, and which never occurs in practice, the resistance of the two-bladed screw when held stationary with its blades in the vertical position immediately behind the stern-post of the vessel, was only 2 per centum less than when revolving freely. And that this slightly less resistance was due to the fact that, because it was masked by the stern-post, owing to the extremely small fraction of the pitch of which it was composed, it made, when revolving freely, fewer revolutions per minute than it would have made if composed of a larger fraction of the pitch, and consequently had to be dragged bodily through the water at a higher speed.

4th. That the resistance of the two-bladed screws when their blades were held stationary in the vertical position immediately behind the vessel's stern-post, was much less, for all the fractions of pitch employed, than when they were held stationary in the horizontal position square across the vessel. And that this difference of the resistances in the two positions became less and less as the screws were composed of greater and greater fractions of the pitch, all other things being the same.

5th. That in the case of screws otherwise identical, except that the surface in the one was divided into two blades, while in the other it was divided into four blades equispaced around the axis, the two-bladed screw when held stationary with its blades in the vertical position immediately behind the vessel's stern-post, gave a much less resistance at equal speed of vessel than the four-bladed screw when held stationary with two of its blades in the vertical and the other two in the horizontal position.

6th. The two-bladed screw under the conditions of 5th, also gave a much less resistance than the four-bladed screw with its blades equispaced around the axis, and held stationary at the angle of 45 degrees with the perpendicular.

7th. The two-bladed screws, when held stationary with their blades in the horizontal position square across the vessel, gave resistances, at equal speed of vessel, in the direct ratio of the fraction of pitch of which they were composed, all other things being the same.

8th. The two-bladed screws, when held stationary with their blades in the vertical position immediately behind the stern-post of the vessel, gave, at equal speed of vessel, resistances increasing with the fraction of pitch of which they were composed, other things being the same. The ratio of this increase in function of fraction of pitch, the experiments were not sufficiently numerous and varied to determine.

9th. The two-bladed screws, with the exception of the extreme case in which a two-bladed screw is employed composed of such small fraction of the pitch that its projected area on a plane at right angles to the axis is covered or masked by the stern-post of the vessel, gave, when freely revolving, resistances in the direct ratio of the fractions of the pitch of which they were composed, all other things being the same.

10th. That with the exception of the extreme case above defined, the two-bladed screws, *ceteris paribus*, composed of whatever fraction of the pitch they might be, make, when revolving freely, at any speed of vessel greater than 3½ geographical miles per hour, the same number of revolutions per mile. As the product of this number of revolutions and the pitch in feet is always less by a constant quantity than the geographical mile in feet, the two-bladed screws, composed of whatever fraction of the pitch they might be, are, for equal speed of vessel, dragged bodily at equal speed through the water.

11th. That in the extreme case above excepted, the two-bladed screw of such small fraction of the pitch that its blades are masked or covered by the stern-post of the vessel, makes, when revolving freely, the same number of revolutions per mile at all speeds of vessel above 3½ geographical miles per hour; but this number is less than

when the fraction of the pitch is greater, and this screw is consequently dragged bodily through the water at a greater speed than in that case, and has a corresponding greater resistance in proportion to its fraction of pitch.

12th. The four-bladed screw with its blades equispaced around the axis and held stationary at angles of 45 degrees with the perpendicular, gave 8.7 per centum more resistance than when it was held stationary with two of its blades in the vertical position and the remaining two in the horizontal position. The above proportion, however, is only true for the particular fraction of pitch of which this screw was composed. It will become less for greater fractions and more for smaller ones. It nevertheless shows that the resistance of a blade, even when at the angle of 45 degrees with the perpendicular, is much less than when in the horizontal position. Had the resistance of the blade in both these cases been equal, the resistance of the screw, with its blades at the angle of 45 degrees with the perpendicular, would have been 440 pounds when the vessel had the speed of 7 geographical miles per hour, whereas the experimental resistance at that speed was only 337 pounds, or 76.6 per centum of the former. The difference strikingly illustrates the effect exercised upon the resistance of the blade by the proximity of the hull.

13th. The four-bladed screw with its blades equispaced around the axis, gave a much less resistance when revolving freely than when held stationary in any position. And when identical with the two-bladed screw in all respects except the number of blades into which the same surface was divided, it gave, when revolving freely, exactly the same resistance as the two-bladed screw when revolving freely at the same speed of vessel.

14th. The above four-bladed screw makes, when revolving freely at any speed of vessel greater than 3½ geographical miles per hour, the same number of revolutions per mile; and this number is exactly the same as that made under the same conditions by a two-bladed screw of the same diameter and pitch, with a fraction of pitch sufficiently great not to be masked by the vessel's stern-post. As the product of this number of revolutions and the pitch in feet is always less by a constant quantity than the geographical mile in feet, the four-bladed screw is dragged bodily through the water at a speed which is always the same per centum of the vessel's speed, let the latter be what it may.

15th. The Mangin screw composed of two identical two-bladed screws placed one immediately behind the other, so that, when viewed in projection on a plane at right angles to axis, it appears like a single two-bladed screw, gave, at equal speed of vessel, when of the same diameter, pitch, and *projected area* on a plane at right angles to the axis as the two-bladed screw, exactly the same resistance as the latter under all the conditions of being held stationary with the blades in the vertical position immediately behind the vessel's stern-post, of being held stationary with the blades in the horizontal position square across the vessel, and of revolving freely. But the Mangin screw, composed as above, has double the fraction of pitch and double the surface of the two-bladed screw above described; consequently, while its propelling efficiency will be greater than that of the two-bladed screw in the ratio of the square root of 2 to the square root of 1, its resistance at equal speed of vessel when dragged with its blades held stationary in any position, or revolving freely, will be only one-half of that of the two-bladed screw.

16th. In the cases of a two-bladed screw, a four-bladed screw, and a Mangin screw, all three having the same diameter, pitch, and fraction of pitch, or, in other words, being identical except as to number and arrangement of blades, their propelling efficiencies in smooth water are equal, but their resistances when dragging at equal speeds of vessel are very different. When these screws are revolving freely the resistances of the two-bladed and four-bladed are equal, while the resistance of the Mangin screw is only one-half of that of either. When these screws are held stationary and dragged through the water, the resistances, at equal speed of vessel, of the two-bladed screw and of the Mangin screw with their blades in the vertical position immediately behind the vessel's stern-post, and of the four-bladed screw with two of its blades in the vertical and the other two in the horizontal position, these positions for the three screws being those in which they have the least resistance when held stationary, compare as 100 for the Mangin screw, 219 for the two-bladed screw, and 344 for the four-bladed screw. As regards the latter, however, this proportion is true only for the particular fraction of pitch (0.3570) of which these screws were composed. With larger fractions of the pitch the resistance of the two-bladed and four-bladed screws would be relatively less, and with smaller fractions of the pitch it would be relatively more, but in a higher degree for the four-bladed than for the two-bladed screw.

All these screws give the same number of revolutions per mile when revolving freely so long as the projected area of the Mangin screw on a plane at right angles to the axis is sufficiently large not to be covered or masked by the vessel's stern-post, and this number is constant at all speeds of vessel above three and a half geographical miles per hour, at which revolution ceased.

17th. The Griffith screw, though of the same diameter as the others, had a pitch

so different in kind and dimensions, and blades so different in number and shape, that no comparison can be made with them. There can only be drawn the general conclusion, that screws with larger pitches when revolving freely, make fewer revolutions per mile and have the product of that number of revolutions and the pitch in feet a greater proportion of the mile in feet than screws of smaller pitches.

18th. The foregoing conclusions, though qualitatively exact for the kind of screws experimented with, let their absolute dimensions of diameter, pitch, and fraction of pitch, be what they may, so long as these remain the same for all, and let them be applied to what form or dimensions of vessels they may, yet quantitatively will be modified by all the circumstances just enumerated, with the exception that whether the same kind and quantity of surface be arranged in two blades, four blades equispaced around the axis, or four blades with two immediately behind the other two, as in the Mangin screw, the resistance when dragging and revolving freely will be as stated in 16th; and that they will all make the same number of revolutions per mile of the vessel's speed.

In the following Table No. 1, will be found the dimensions of the experimental screws, which, though given in the preceding report on their propelling efficiencies, are here re-inserted for convenience of reference.

In the succeeding Table No. 2, will be found collected under appropriate headings, the numerical results of the experiments made with the screws dragging under various conditions.

Table No. 1, containing the principal dimensions of the screws employed in the foregoing experiments.

Designation of the screws.	Diameter, in feet.	Diameter of hub, in feet.	Pitch, in feet.	Number of blades.	Length of each blade in direction of axis, in feet.	Fraction used of the pitch.	Projected area of the blades on a plane at right angles to axis, in square feet.	Helicoidal area of the blades, in square feet.
A	4.3333	0.50	5.136	2	0.9167	0.3570	5.1950	6.1321
B	4.3333	0.50	5.136	2	0.7187	0.2799	4.0730	4.8[illegible]
C	4.3333	0.50	5.136	2	0.4583	0.1785	2.0975	3.06[illegible]
D	4.3333	0.50	5.136	2	0.2604	0.1014	1.4735	1.7417
E	4.3333	0.50	5.136	4	0.4583	0.3570	5.1950	6.1321
F*	4.3333	0.50	5.136	4	0.4583	0.3570	5.1950	6.1321
H†	4.3333	1.25	7.000	3	‡0.9167	§0.2034	2.7495	4.2966

* Mangin or duplex screw.
‡ Maximum.
† Griffith screw, with expanding pitch from 6¼ feet to 7¼ feet.
§ Calculated for the mean pitch of 7 feet.

Table No. 2, containing the results of the trials made to ascertain the dynamometrical resistances of the experimental screws of the United States steam-launch No. 4, when it was towed by the steamer Monterey, with the screws dragging under the different conditions of revolving freely by the pressure of the water on the forward side of their blades, and of being held stationary in different positions.

Kind of screw and conditions of its trials.	Designation of the screws.	Speed.				Resistances.				Loss of vessel's speed due to the drag of the screw.		
		Speed of the vessel, in geographical miles per hour.	Number of revolutions made by the screw per geographical mile.	Speed of the screw, in geographical miles per hour, calculated from the pitch and the revolutions.	Difference, in per centum of the speed of the vessel, between the speed of the vessel and the speed of the screw.	Resistance of the vessel alone—*i. e.*, without any screw—in pounds per dynamometer.	Resistance of the screw alone, in pounds per dynamometer.	Aggregate resistance of vessel and screw, in pounds per dynamometer.	Resistance of the screw, in per centum of the resistance of the vessel alone.	Speed, in geographical miles per hour, that the vessel would have had with the screw removed, had the vessel been towed by the pull of the aggregate resistance of vessel and screw by dynamometer.	Loss of speed in geographical miles per hour, due to the resistance of the screw.	Loss of speed due to the resistance of the screw, in per centum of the speed the vessel would have had with the screw removed, had the vessel been towed by the pull of the aggregate resistance of vessel and screw by dynamometer.
2-bladed screw:												
Revolving freely by the pressure of the water	A	7	921	5.441	22.28	631	134	765	21.24	7.7075	0.7075	9.18
Held stationary, with the blades vertical behind the stern-post	A	7	.....	.....	.....	631	350	981	55.47	8.7281	1.7281	19.80
Held stationary, with the blades horizontal, square across the vessel	A	7	.....	.....	.....	631	440	1,071	69.73	9.1196	2.1196	23.24
2-bladed screw:												
Revolving freely by the pressure of the water	B	7	921	5.441	22.28	631	105	736	16.64	7.5600	0.5600	7.41
Held stationary, with the blades vertical behind the stern-post	B	7	.....	.....	.....	631	197	828	31.22	8.0186	1.0186	12.73
Held stationary, with the blades horisontal, square across the vessel	B	7	.....	.....	.....	631	345	976	54.68	8.7058	1.7058	19.59
2-bladed screw:												
Revolving freely by the pressure of the water	C	7	921	5.441	22.28	631	67	698	10.62	7.3623	0.3623	4.92
Held stationary, with the blades vertical behind the stern-post	C	7	.....	.....	.....	631	90	721	14.26	7.4826	0.4826	6.45
Held stationary, with the blades horizontal, square across the vessel	C	7	.....	.....	.....	631	220	851	34.86	8.1292	1.1292	13.89
2-bladed screw:												
Revolving freely by the pressure of the water	D	7	757	4.472	36.12	631	54	685	8.56	7.2934	0.2934	4.02
Held stationary, with the blades vertical behind the stern post	D	7	.....	.....	.....	631	26	657	4.12	7.1428	0.1428	2.00
Held stationary, with the blades horizontal, square across the vessel	D	7	.....	.....	.....	631	125	756	19.81	7.6620	0.6620	8.64
4-bladed screw, blades equidistant:												
Revolving freely by the pressure of the water	E	7	921	5.441	22.28	631	134	765	21.24	7.7075	0.7075	9.18
Held stationary, with one pair of blades vertical and other horizontal	E	7	.....	.....	.....	631	310	941	49.13	8.5483	1.5483	18.11
Held stationary, with the blades at the angle of 45 degrees with the vertical	E	7	.....	.....	.....	631	337	968	53.41	8.6696	1.6696	19.26

Table No. 2, containing the results of the trials made, &c.—Continued.

Kind of screw and conditions of its trials.	Designation of the screws.	Speed.				Resistances.				Loss of vessel's speed due to the drag of the screw.		
		Speed of the vessel, in geographical miles per hour.	Number of revolutions made by the screw per geographical mile.	Speed of the screw, in geographical miles per hour, calculated from the pitch and the revolutions.	Difference, in per centum of the speed of the vessel, between the speed of the vessel and the speed of the screw.	Resistance of the vessel alone—*i. e.*, without any screw—in pounds per dynamometer.	Resistance of the screw alone, in pounds per dynamometer.	Aggregate resistance of vessel and screw, in pounds per dynamometer.	Resistance of the screw, in per centum of the resistance of the vessel alone.	Speed, in geographical miles per hour, that the vessel would have had with the screw removed, had the vessel been towed by the pull of the aggregate resistance of vessel and screw by dynamometer.	Loss of speed in geographical miles per hour, due to the resistance of the screw.	Loss of speed due to the resistance of the screw, in per centum of the speed the vessel would have had with the screw removed, had the vessel been towed by the pull of the aggregate resistance of vessel and screw by dynamometer.
4-bladed screw, Mangin's system:												
Revolving freely by the pressure of the water	F	7	921	5.441	22.28	631	67	698	10.62	7.3623	0.3623	4.92
Held stationary, with the blades vertical behind the stern-post	F	7	.....	.....	.....	631	90	721	14.26	7.4826	0.4826	6.45
Held stationary, with the blades horizontal, square across the vessel	F	7	.....	.....	.....	631	220	851	34.86	8.1292	1.1292	13.89
3-bladed screw, Griffith's system:												
Revolving freely by the pressure of the water	H	7	665	5.3541	23.51	631	125	756	19.81	7.6620	0.6620	8.64
Held stationary, with one blade placed vertically below the shaft, and the remaining two blades above the shaft at angles of 60 degrees from the vertical	H	7	.....	.....	.....	631	283	914	44.85	8.4247	1.4247	16.91
Held stationary, with one blade placed vertically above the shaft, and the remaining two blades below the shaft at angles of 60 degrees from the vertical	H	7	.....	.....	.....	631	361	992	57.21	8.7768	1.7768	20.24
Held stationary, with one blade placed horizontally on one side of the vessel's stern-post, and the remaining two blades on the other side at angles of 60 degrees from the vertical	H	7	.....	.....	.....	631	331	962	52.46	8.6431	1.6431	19.01

Very respectfully, your obedient servant,
B. F. ISHERWOOD, *Chief Engineer.*

To Engineer-in-Chief WM. W. W. WOOD, U. S. N.,
Chief of the Bureau of Steam-Engineering, Navy Department.

NOVEMBER 21, 1874.

C.

UNITED STATES STEAMER JUNIATA, (3d rate,)
At Sea, Latitude 40° 22′ *North, Longitude* 78° 35′ *West, October* 24, 1873.

SIR: I have the honor to inform you that I have on board this ship eleven (11) bags of coal, about 150 pounds to the bag, which was mined by a party from this ship at the Waigat Straits, on the north side of Disco Island, Greenland.

Thinking you might desire to test its quality, I hold it at your disposition.

I have furnished the honorable Secretary of the Navy with information in regard to the coal and mines.

Very respectfully, your obedient servant,

D. L. BRAINE,
Commander U. S. N., Commanding United States Steamer Juniata.

Engineer-in-Chief W. W. W. WOOD, U. S. N.,
Chief of the Bureau of Steam-Engineering, Navy Department, Washington, D. C.

NEW YORK, 236 WEST FOURTH STREET,
April 13, 1874.

DEAR SIR: In accordance with my promise, I herewith lay before you the result of an analysis of the Greenland coal which you were kind enough to furnish me some two months ago. Specimens of the coal were given for analysis to two of our most accurate chemists, Prof. Henry Wurtz, of Hoboken, editor of the Gas-Light Journal, and Professor Newton, of the Columbia College Mining-School. The result of examination by the former of them is herewith presented. It is perhaps unnecessary for me to say that Professor Wurtz is unsurpassed in the accuracy of his analysis by any chemist in our country, and his name is authoritative with all who know him. He is, moreover, particularly familiar with the chemistry of the hydrocarbons, having been required, in his capacity of editor of the Gas-Light Journal, to investigate those substances very thoroughly. His statement of results may, therefore, be confidently relied upon.

The other analysis is made, but has not yet been furnished me. I will endeavor to forward it as soon as it is received.

Very gratefully, yours,

BENJ. N. MARTIN.

WM. W. W. WOOD, Esq.,
Chief Engineer, U. S. N.

LIGNITE.

Brought by the United States steamer Juniata, in 1873, from Disco Island, on the west coast of Greenland.

This material is black in the mass, but when in powder brownish. It shrinks and becomes full of fissures in dry air. It is composed of a mixture of a dull mineral charcoal and a lustrous resinoid material, with much the aspect of the lustrous component of caking coals, but less brilliant. These two ingredients are irregularly interlaminated. My sample contained one granule of fossil resin, of the size of a grain of wheat, amber-colored and transparent, which fused when heated, and then gave off a clear yellow oil, with an odor like oil of amber.

After drying the lignite in small fragments for some days, in a dry winter atmosphere, it was operated on according to the customary mode of "crucible analysis" for coals, and yielded—

Water		14.00
Volatile matter		35.38
Coke, containing	carbon	41.79
	ash	8.83
		100.00

During the expulsion of the volatile portion, the flame was pale-yellow, without smoke or soot. This would apparently indicate but little candle-power for the gas; but it is not conclusive, as the steam given off must greatly modify the flame. If the above proportion of volatile matter still holds in the *dehydrated* lignite, the latter would equal in this respect a rich gas-coal, having over 41 per cent. of volatile matter. This point would be worthy of determination, in view of the value of a gas-coal in those dark latitudes. The amount of my sample was much too small to admit of any experiments in gas-making. The water requires for its expulsion from the mineral only the

heat of a sand-bath, and when it has been expelled I have found that the powder of the mineral acquires a somewhat *pyrophoric* quality, taking fire when heated at a temperature much below redness.

During the coking of this lignite in small fragments, these shrink in volume, *without change of form*, at least 40 per cent.; and the coke contains portions greatly resembling anthracite. This fact proves that a powerful and valuable fuel may be obtained by coking. Sulphur was present in this coke to a small but undetermined extent. The little masses of ash left by the complete combustion of the fragments were variegated in color, some having a curious *greenish* tinge, which was supposed to be due to manganese; but blow-pipe tests made subsequently have failed to detect that metal. This ash contains some lime, (with very little magnesia,) though it does not effervesce with acids, and is neutral to test-paper. There is also some iron; and the ash melts before the blow-pipe to a dark glass, indicating that this fuel is liable to clinker, and might be destructive to grate-bars.

The lignite, which proved, as I am informed, to be of Miocene Tertiary age, comes close in the results of its "crucible analysis" to the Cretaceous lignites of Mount Diablo, in California. Professor Whitney gives (Geology of California, 1865, p. 30) for the mean of five varieties:

	Mount Diablo.	Disco Island.
Water	15.53	14.00
Volatile matter	37.50	35.38
Fixed carbon	42.66	41.79
Ash	4.50	8.83
	100.00	100.00

If the ash, which is a very variable constituent, be eliminated in each case, the centesimal composition approaches still closer:

	Mount Diablo. J. D. Whitney.	Disco Island. H. Wurtz.
Water	16.23	15.36
Volatile matter	39.18	38.61
Fixed carbon	44.58	45.83
	100.00	100.00

Density.—One of the most remarkable results obtained by me in the examination of this mineral is its very high density. Two determinations made upon small fragments, by the stoppered-bottle method, gave 1.452 and 1.468, with a mean of 1.46. The highest density figures for lignite that I have encountered are 1.354 for one from Colorado, containing 13.67 water and 4 per cent. ash, (J. T. Hodges,) and 1.364 for an Austrian variety, containing 12.54 ash, (Dana's Mineralogy, ed. 1868, p. 758.) The great shrinkage while coking led me to determine, with great interest and care, the density of the coke. It was found, when moistened with water, to *effervesce* strongly, evolving a considerable volume of (oxygen?) gas. I was obliged to boil it with water for half an hour, before it ceased to emit bubbles. Its true density was then found to be as high as 1.836! This is higher than any anthracite that I have found on record so far, those of Pennsylvania, except where very ashy, not ranging higher than 1.6, and the heaviest, the Rhode Island, being but 1.8. It is to be remembered, however, that the coke of the Greenland lignite must contain some 17 per cent. of ash. On the supposition that this ash has a density of 2.5, the calculated density of the 83 per cent. of the carbonaceous matter of the coke is still as high as 1.7. I am unable to say what is the density of the cokes made from Colorado lignites, nor, indeed, whether the *true* densities have been determined of *any* cokes whatever.

HENRY WURTZ,
Hoboken, N. J.

NEW YORK, 236 WEST FOURTH STREET,
April 28, 1874.

DEAR SIR: In accordance with my promise, made when I transmitted to you an analysis of the Greenland coal brought by the Juniata, I now send another from a different source. The former was by Prof. Henry Wurtz. This is from the laboratory of the School of Mines of Columbia College, New York, an institution which, I need hardly say, is of the highest scientific standing.

Prof. Henry Newton has been kind enough to take charge of the work, though it has been executed partly by his assistant, Mr. P. Rickets, and partly by his colleague in charge of the chemical laboratory, Mr. H. Carrington Bolton. The names of these gentlemen afford a guarantee of accuracy, and I am happy to have been able to engage their thoroughly competent co-operation in the work.

The results are in such close conformity with those of the preceding analysis of Professor Wurtz as to give still further assurance that they may be depended upon.

I feel gratified to have succeeded in my endeavors to obtain a careful examination and a definite result, and shall be pleased if the information thus gained shall prove of any value to the Department by which the specimens were so kindly furnished me.

I remain, very respectfully, yours,

BENJ. N. MARTIN.

WM. W. W. WOOD,
Engineer-in-Chief, United States Navy.

SCHOOL OF MINES, COLUMBIA COLLEGE,
Corner Forty-ninth Street and Fourth Avenue,
New York, ——, 187-.

Analysis of coal marked "Greenland."

Moisture	14.00
Volatile and combustible matter	36.76
Fixed carbon	43.17
Sulphur	.47
Ash	5.60
	100.00

Respectfully reported by

H. CARRINGTON BOLTON.

APRIL 27, 1874.

All these determinations are averaged from two analyses, save the volatile and combustible matter, which is averaged from three.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Bureau of Steam-Engineering.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
D.		
SALARIES.		
Chief clerk, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3)	$1,800 00	
Draughtsman, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and March 3, 1867, (14 Stat. at L., p. 450, sec. 1)	1,800 00	
One clerk of class two, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1)	1,400 00	
One assistant draughtsman, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3)	1,200 00	
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3)	840 00	
One laborer, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3)	720 00	
	7,760 00	$7,760 00
CONTINGENT EXPENSES.		
Stationery and miscellaneous items, (appropriated)	1,000 00	1,000 00
PUBLIC PRINTING AND BINDING.		
For printing and binding, to be executed under the direction of the Congressional Printer, per act March 8, 1872, (17 Stat at L., p. 82, sec. 2)	3,000 00	3,000 00
E.		
STEAM-MACHINERY.		
Repairs and preservation of machinery, boilers, &c., on all naval vessels, (appropriated)	1,350,000 00	
Fitting, repairs, and preservation of machinery and tools in the several navy-yards, (appropriated)	50,000 00	
Labor in navy-yards and stations not included above, and incidental expenses, (appropriated)	100 000 00	
Purchase and preservation of oils, coals, metals, and all material and stores, (appropriated)	500 000 00	
	*2,000,000	1,800 000

In view of the fact that a large number of the vessels of the Navy are now needing new boilers, this estimate is as low as is consistent with the interests of the service.

No. 11.

BUREAU OF CONSTRUCTION AND REPAIR.

NAVY DEPARTMENT,
BUREAU OF CONSTRUCTION AND REPAIR,
December 3, 1874.

SIR: In compliance with your instructions, I have the honor to transmit herewith estimates of expenditures for which appropriations will be required for the fiscal year ending June 30, 1876, coming under the cognizance of the Bureau of Construction and Repair.

Estimates in tables A and B are for the pay of employés attached to this Bureau, and at the several navy-yards, as authorized by acts of Congress.

Estimates in table C are for the preservation of vessels on the stocks and in ordinary; purchase of materials and stores of all kinds; labor at navy-yards and on foreign stations; preservation of materials; purchase of tools; wear, tear, and repair of vessels afloat, and general maintenance of the Navy; incidental expenses and postage.

Estimate in table D is for the preservation of live-oak timber upon the Government lands, for naval purposes.

The work upon the repairs of the iron-clads and vessels requiring large expenditures has progressed with as much dispatch as the appropriation would allow, and is well advanced upon those not yet completed.

Of the Quinnebaug and class, the Swatara has been completed and is on a cruise, the Marion and Vandalia are receiving their machinery, and the Galena, Quinnebaug, Mohican, and Nipsic are nearly ready for launching.

Of the eight sloops authorized by act of Congress, six have been launched and are receiving their machinery; the seventh will be launched very soon; the eighth is well advanced and will be launched as soon as her machinery is ready to be put on board.

No work has yet been done to the Puritan owing to the want of funds, but a design is being prepared to make that vessel a powerful iron-clad with a high rate of speed, to be armed with four 10-inch rifled guns, and to be heavily plated.

The only vessels adapted to the service, required by act of Congress to be turned over to the cities of New York, Boston, Baltimore, and San Francisco, for nautical schools of instruction, are sailing-vessels of war, which have required extensive repairs. The cost will be quite $50,000 to each vessel, and as that expenditure was not provided for in the estimates, an appropriation should be made to re-imburse the annual expenditures of repairs for the Navy, to the amount thus used.

I have the honor to be, very respectfully, your obedient servant,

I. HANSCOM,
Chief of Bureau.

Hon. GEORGE M. ROBESON,
Secretary of the Navy.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Bureau of Construction and Repair.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
A.		
SALARIES.		
Chief clerk, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3)	$1,800 00	
Draughtsman, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1)	1,800 00	
One clerk of class four, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8)	1,800 00	
Two clerks of class three, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8)	3,200 00	
Two clerks of class two, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8)	2,800 00	
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and March 3, 1869, (15 Stat. at L., p. 287, sec. 1)	840 00	
One laborer, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and March 3, 1869, (15 Stat. at L., p. 287, sec. 1)	720 00	
	12,960 00	
CONTINGENT.		
Stationery and miscellaneous items, (appropriated)	800 00	
B.		
CIVIL ESTABLISHMENT.		
At the navy-yard, Kittery:		
Clerk of store-houses	1,400 00	
Clerk to naval constructor	1,400 00	
Time clerk	1,400 00	
Draughtsman to naval constructor	1,600 00	
Inspector of timber	1,400 00	
Superintendent of floating-dock	1,400 00	
	8,600 00	
At the navy-yard, Charlestown:		
Clerk of store-houses	1,500 00	
Clerk to naval constructor	1,500 00	
Time-clerk	1,500 00	
Draughtsman to naval constructor	1,600 00	
Inspector of timber	1,500 00	
	7,600 00	
At the navy-yard, Brooklyn:		
Clerk of store-houses	1,500 00	
Clerk to naval constructor	1,500 00	
Time-clerk	1,500 00	
Draughtsman to naval constructor	1,600 00	
Inspector of timber	1,500 00	
	7,600 00	
At the navy-yard, Philadelphia:		
Clerk of store-houses	1,400 00	
Clerk to naval constructor	1,400 00	
Time-clerk	1,400 00	
Draughtsman to naval constructor	1,600 00	
Inspector of timber	1,400 00	
Superintendent of floating-dock	1,400 00	
	8,600 00	
At the navy-yard, Washington:		
Clerk of store-houses	1,400 00	
Clerk to naval constructor	1,400 00	
Time-clerk	1,200 00	
Draughtsman to naval constructor	1,600 00	
Inspector of timber	1,200 00	
	6,800 00	

Estimates of appropriations required for the service, &c.—Continued.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
At the navy-yard, Norfolk:		
Clerk of store-houses	$1,400 00	
Clerk to naval constructor	1,400 00	
Time-clerk	1,400 00	
Draughtsman to naval constructor	1,600 00	
Inspector of timber	1,400 00	
	7,600 00	
At the navy-yard, Pensacola:		
Clerk of store-houses	1,400 00	
At the navy-yard, Mare Island:		
Clerk of store-houses	1,500 00	
Clerk to naval constructor	1,500 00	
Time-clerk	1,500 00	
Draughtsman to naval constructor	1,600 00	
Inspector of timber	1,500 00	
Superintendent of floating-dock	1,500 00	
	9,100 00	
C.		
CONSTRUCTION AND REPAIR OF VESSELS.		
Preservation of vessels on the stocks and in ordinary; purchase of materials and stores of all kinds; labor in navy-yards and on foreign stations; preservation of material; purchase of tools; wear, tear, and repair of vessels afloat, and general maintenance of the Navy; incidental expenses, advertising, and foreign postages	3,500,000 00	$3,500,000 00
D.		
PROTECTION OF TIMBER-LANDS.		
Salaries of subagents and watchmen, and miscellaneous expenses	5,000 00	5,000 00

Offers to furnish material for the Navy, under the advertisement of the Bureau of Construction and Repair of April 6, 1874, at the navy-yard, Portsmouth, N. H.

Class No. 13. White-pine plank boards:

A. P. Brown	$6,405 00
Southard & Co	5,865 00
Trickey & Jewett	*5,800 00
Watson & Pittinger	6,125 00
Joseph W. Duryee	6,005 00
George A. Hammond	6,040 00
Shepherd & Chester	†

Class No. 15. White ash, elm, beech:

A. P. Brown	1,547 00
Southard & Co	1,045 00
Trickey & Jewett	*900 00
Watson & Pittinger	1,240 00
Joseph W. Duryee	918 00
George A. Hammond	1,088 00
Shepherd & Chester	†

Class No. 18. Black walnut, mahogany, &c.:

A. P. Brown	1,695 00
Southard & Co	2,100 00
Trickey & Jewett	*1,420 00
Watson & Pittinger	2,190 00
Joseph W. Duryee	1,494 00
George A. Hammond	2,190 00
Shepherd & Chester	†

Class No. 33. Wrought iron, flat:

A. P. Brown	310 50
Wilson & Magraw	189 75
Hyatt & Spencer	*158 00
George H. Creed	184 00
James L. Parker	166 75
Catasauqua Manufacturing Co	161 00

*Accepted.

†Informal.

Class No. 37. Iron spikes:

A. P. Brown	$240 00
Wilson & Magraw	187 50
Hyatt & Spencer	*153 75
George H. Creed	172 50
James L. Parker	172 50
J. H. Wainwright	195 00

Class No. 39. Iron cut nails:

Wilson & Magraw	*247 74
Hyatt & Spencer	269 44
George H. Creed	252 90
James L. Parker	250 00
J. H. Wainwright	284 53

Class No. 42. Lead, pipe, sheet:

David Babcock & Co.	462 50
A. P. Brown	600 00
Hyatt & Spencer	425 00
George H. Creed	485 00
James L. Parker	*420 00

Class No. 43. Zinc:

David Babcock & Co.	855 00
A. P. Brown	1,132 50
Wilson & Magraw	1,017 50
Hyatt & Spencer	820 00
George H. Creed	*810 00

Class No. 44. Tin:

David Babcock & Co.	801 50
A. P. Brown	1,347 00
Hyatt & Spencer	736 25
George H. Creed	*734 00
James L. Parker	780 00

Class No. 48. Locks, hinges, &c.:

Wilson & Magraw	194 00
Hyatt & Spencer	116 00
George H. Creed	*115 00

Class No. 49. Screws of brass and iron:

A. P. Brown	424 65
Wilson & Magraw	305 17
Hyatt & Spencer	*247 90
George H. Creed	308 20
James L. Parker	271 00
Walton Bros	278 95
Morton, Reed & Co.	330 80

Class No. 50. Files:

Wilson & Magraw	697 15
Hyatt & Spencer	572 28
George H. Creed	*511 02
James L. Parker	654 00
Henry A. Priest & Co.	555 18
Walton Bros	†485 25
Morton, Reed & Co.	728 76

* Accepted.

Class No. 51. Augers:

David Babcock & Co.	$357 80
Wilson & Magraw	505 50
Hyatt & Spencer	351 95
George H. Creed	*315 00
James L. Parker	335 00
Walton Bros	415 50

Class No. 52. Tools for stores:

Wilson & Magraw	*193 94
Hyatt & Spencer	200 40
George H. Creed	266 20

Class No. 53. Tools for yard use:

Hyatt & Spencer	*133 40
George H. Creed	142 80
Henry A. Priest & Co.	135 64

Class No. 54. Hardware:

David Babcock & Co.	598 50
Wilson & Magraw	764 25
Hyatt & Spencer	560 70
George H. Creed	*553 00

Class No. 56. White lead:

David Babcock & Co.	1,100 00
A. P. Brown	1,225 00
Hyatt & Spencer	987 50
George H. Creed	*950 00
James L. Parker	987 00
Walton Bros	1,000 00
Harrison Bros. & Co.	1,009 00

Class No. 58. Colored paints, driers:

A. P. Brown	173 50
Wilson & Magraw	157 50
Hyatt & Spencer	120 50
George H. Creed	123 25
James L. Parker	119 00
Walton Bros	116 50
Harrison Bros. & Co.	*112 50

Class No. 59. Linseed-oil:

David Babcock & Co.	980 00
A. P. Brown	1,000 00
Hyatt & Spencer	999 00
George H. Creed	*930 00
James L. Parker	972 50

Class No. 60. Varnish, spirits turpentine.

David Babcock & Co.	613 20
Hyatt & Spencer	*412 05
George H. Creed	432 20
James L. Parker	539 49
Walton Bros	532 90

† Bid withdrawn.

Class No. 63. Sperm and lard oil:

David Babcock & Co....	$1,264 00
A. P. Brown.....	1,520 00
Hyatt & Spencer.....	1,289 40
George H. Creed.....	*1,095 00
Henry A. Priest & Co...	1,215 00

Class No. 64. Tallow, soap:

David Babcock & Co....	195 00
Wilson & Magraw.....	*‡180 00
Hyatt & Spencer	210 00
George H. Creed.....	210 00
John Stokell & Co.....	‡180 00

Class No. 65. Fish-oil:

David Babcock & Co....	268 00
Hyatt & Spencer	*220 00
George H. Creed.....	280 00
John Stokell & Co.....	340 00

Class No. 71. Stationery:

Frost & Adams	215 75
William H. Dempsey....	212 20
William Ballantyne.....	237 74
Warren Choate & Co...	*184 50

Class No. 73. Ship-chandlery:

Hyatt & Spencer.....	*310 20
George H. Creed.....	403 25
James L. Parker.....	359 50
David Babcock & Co...	413 00

Class No. 85. Anthracite coal:

David Babcock & Co....	$4,267 50
A. P. Brown.....	5,274 00
Samuel G. French.....	4,270 00
Hyatt & Spencer	4,205 00
Joseph Sise & Co.....	4,626 00
Meeker & Dean.....	4,150 00
Charles E. Walker & Co	*4,090 00
Walton Bros	†3,990 00
R. T. Heiston.....	4,344 50
James Symington.....	4,776 50
Audenried, Norton & Co.	4,777 50

Class No. 87. Bituminous coal:

David Babcock & Co ...	4,374 00
A. P. Brown	4,734 00
S. C. Thwing & Co.....	‡4,344 00
Samuel G. French	4,470 00
Hyatt and Spencer.....	4,620 00
Joseph Sise & Co	4,776 00
Meeker & Dean.....	4,494 00
Charles E. Walker & Co.	4,440 00
Walton Bros.....	†3,990 00
H. C. Winship	*‡4,344 00
Alexander Ray.....	4,350 00
James Symington.....	4,644 00
Robert Mowe	4,746 00

Class No. 88. Charcoal:

David Babcock & Co....	1,238 75
Hyatt & Spencer	*858 75
Walton Bros.....	885 00
John Stokell & Co	1,437 50

Opened in presence of—
I. HANSCOM, *Chief of Bureau.*
H. A GOLDSBOROUGH, *Chief Clerk.*
B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, *May* 7, 1874.

Offers to furnish material for the Navy, under the advertisement of the Bureau of Construction and Repair of April 6, 1874, *at the navy-yard, Boston, Mass.*

Class No. 16. White-ash oars:

David Babcock & Co....	‡$660 00
George H. Creed	*‡660 00
Southard & Co	1,150 00
George A. Hammond....	718 00
A. P. Brown.....	1,600 00

Class No. 25. Lignum-vitæ:

A. P. Brown	1,020 00
David Babcock & Co ...	944 00
George H. Creed	900 00
Southard & Co.....	1,140 00
Trickey & Jewett.....	*800 00
George A. Hammond....	1,104 00
Watson & Pittinger.....	2,920 00

Class No. 32. Wrought iron, round and square:

A. P. Brown	$1,105 00
George H. Creed	715 00
Hyatt & Spencer.....	659 00
Walton Bros.....	687 75
Thomas Poultney	*609 00
Catasauqua Manufacturing Company.....	666 00

Class No. 33. Wrought iron, flat:

A. P. Brown	858 00
George H. Creed	584 00
Hyatt & Spencer.....	665 60

* Accepted. † Bid withdrawn. ‡ Decided by lot.

Walton Bros	$597 45
Thomas Poultney	†392 80
Catasauqua Manufacturing Company	657 00

Class No. 34. Iron plate:

George H. Creed	*296 33
Hyatt & Spencer	345 14
Walworth Manufacturing Company	540 44
Thomas Poultney	355 44
Morris Tasker & Co	444 32

Class No. 35. Steel:

A. P. Brown	1,149 75
David Babcock & Co	1,679 00
George D. Putnam	1,131 50
George H. Creed	1,092 50
George Dunbar & Co	1,095 00
Hyatt & Spencer	*1,051 20
Leeds, Robinson & Co	1,131 50
Walton Bros	1,095 00
Thomas Poultney	1,095 00
Morris Tasker & Co	1,085 87
William Baldwin	1,095 00
Morton, Reed & Co	1,146 10

Class No. 37. Iron spikes:

A. P. Brown	1,312 50
J. W. Buker	950 00
George H. Creed	862 50
Hyatt & Spencer	*750 00
Thomas Poultney	887 50
J. H. Wainwright	956 25

Class No. 42. Lead, pipe, sheet:

A. P. Brown	132 00
David Babcock & Co	101 75
George H. Creed	97 90
Hyatt & Spencer	93 50
J. H. Chadwick & Co	*92 13
Thomas Poultney	96 80

Class No. 43. Zinc:

A. P. Brown	975 00
David Babcock & Co	780 00
George D. Putnam	725 00
George H. Creed	*700 00
Hyatt & Spencer	740 00
Thomas Poultney	790 00

Class No. 53. Tools, for yard use:

David Babcock & Co	1,378 90
George D. Putnam	1,106 65
George H. Creed	977 15
Hyatt & Spencer	*896 82
Henry A. Priest & Co	1,137 97
Buss & Bradley	1,323 95

Class No. 54. Hardware:

David Babcock & Co	994 93
George D. Putnam	754 42
George H. Creed	*$635 80
Hyatt & Spencer	867 28

Class No. 56. White lead:

A. P. Brown	1,200 00
David Babcock & Co	1,075 00
George D. Putnam	*‡940 00
George H. Creed	‡940 00
Hyatt & Spencer	987 50
J. H. Chadwick & Co	950 00
Walton Bros	1,000 00
Harrison Bros. & Co	1,000 00
Thomas Poultney	1,040 00

Class No. 59. Linseed-oil:

A. P. Brown	1,100 00
David Babcock & Co	970 00
George D. Putnam	*900 00
George H. Creed	930 00
Hyatt & Spencer	980 00
Thomas Poultney	990 00

Class No. 60. Varnish, spirits of turpentine:

David Babcock & Co	1,276 20
A. P. Brown	1,438 00
George D. Putnam	*1,149 50
George H. Creed	1,178 00
Hyatt & Spencer	1,224 50
Walton Bros	1,234 50
Thomas Poultney	1,263 50

Class No. 63. Sperm and lard oil:

A. P. Brown	2,217 50
David Babcock & Co	1,968 70
George D. Putnam	1,640 50
George H. Creed	*1,551 00
Hyatt & Spencer	2,020 50
Henry A. Priest & Co	1,896 65
Buss & Bradley	†1,495 00
Thomas Poultney	2,067 50

Class No. 69. Brushes:

David Babcock & Co	350 00
George D. Putnam	350 00
George H. Creed	*292 00
Hyatt & Spencer	355 00

Class No. 71. Stationery:

William H. Dempsey	697 74
Frost & Adams	618 25
William Ballantyne	638 06
Warren Choate & Co	*553 57

Class No. 72. Crucibles:

David Babcock & Co	142 80
George H. Creed	117 00
Hyatt & Spencer	*82 30
Walton Bros	103 20
Ross & Hoferkamp	123 84
D. A. Trefethan	118 68

* Accepted. † Informal. ‡ Decided by lot.

Class No. 73. Ship-chandlery:

David Babcock & Co....	$532 00
George D. Putnam	*444 00
George H. Creed	456 50
Hyatt & Spencer	530 75

Class No. 74. Acids:

J. W. Buker	*266 75
George H. Creed	376 75
Hyatt & Spencer.....	358 29

Class No., 75. Rosin, pitch, crude turpentine:

A. P. Brown	400 00
David Babcock & Co....	280 00
J. W. Buker	300 00
George H. Creed	*225 00
Hyatt & Spencer	244 00

Class No. 77. §Belting, packing:

David Babcock & Co...	492 00
George D. Putnam	398 50
George H. Creed	443 00
Hyatt & Spencer.....	410 00
Henry A. Priest & Co ...	415 50
Walworth Manufacturing Company	394 50
William A. Torrey & Co.	760 00

Class No. 85. Anthracite coal:

A. P. Brown	$11,947 50
David Babcock & Co....	9,342 00
George H. Creed	10,125 00
Hyatt & Spencer	9,382 50
Meeker & Dean	†9,112 50
Samuel G. French.....	*9,247 50
Walton Bros.....	†8,977 50
R. T. Heiston	9,697 50
James Symington.....	10,098 00
Audenried, Norton & Co .	10,462 50

Class No. 87. Bituminous coal:

A. P. Brown	4,950 00
David Babcock & Co....	4,374 00
George H. Creed	5,400 00
Hyatt & Spencer.....	4,590 00
S. C. Thwing & Co.....	4,284 00
Meeker & Dean.....	4,392 00
Samuel G. French.....	4,320 00
Walton Bros.....	†3,990 00
H. C. Winship	4,194 00
Alexander Ray	*4,182 00
James Symington.....	4,644 00
Robert Mowe	4,596 00

Class No. 88. Charcoal:

David Babcock & Co....	1,875 00
George D. Putnam.....	1,475 00
George H. Creed.....	1,585 00
Hyatt & Spencer	*1,390 00
Walton Bros.....	4,207 50

Opened in presence of—
I. HANSCOM, *Chief of Bureau.*
H. A. GOLDSBOROUGH, *Chief Clerk.*
B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, *May 7*, 1874.

Offers to furnish material for the Navy, under the advertisement of the Bureau of Construction and Repair, of April 6, 1874, at the navy-yard, New York.

Class No. 1. White-oak logs:

A. P. Brown	$3,150 00
J. M. Richardson.....	3,500 00
Mann & Co.....	2,700 00
Southard & Co	*2,695 00
Trickey & Jewett.....	3,000 00
George A. Hammond....	3,200 00
Richard Fentress	3,000 00
A. H. Lindsay.....	2,975 00
R. J. Neely	2,900 00

Class No. 16. White-ash oars:

David Babcock & Co....	790 00
A. P. Brown	2,000 00
Southard & Co	1,275 00
L. D. Jennard.....	875 00
George A. Hammond....	850 00
DeGraw, Aymar & Co...	*725 00

Class No. 18. Black walnut, mahogany, &c..

A. P. Brown.....	$560 00
Southard & Co.....	580 00
Trickey & Jewett.....	*340 00
George A. Hammond....	385 00
Watson & Pittinger.....	500 00
Richard Fentress.....	480 00
Joseph W. Duryee.....	385 00

Class No. 24. White-oak staves, &c.:

David Babcock & Co....	*765 00
J. W. Buker.....	960 00
Watson & Pittinger.....	874 00

Class No. 32. Wrought iron, round and square:

A. P. Brown.....	4,160 00
Hyatt & Spencer.....	2,086 00

*Accepted. †Informal. ‡Bid withdrawn. §Class not awarded

George H. Creed	$2,000 00
S. A. Wheelwright	2,240 00
Walton Brothers	2.362 50
William Gardner	2,425 00
Thomas Poultney	*1,866 00
Catasauqua Manufacturing Company	2,256 00

Class No. 42. Lead, pipe, sheet:

David Babcock & Co	2,275 00
A. P. Brown	2,860 00
Hyatt & Spencer	2,132 00
George H. Creed	2,190 00
S. A. Wheelwright	2,236 00
Thomas Poultney	*2,080 00

Class No. 43. Zinc.

David Babcock & Co	1,500 00
A. P. Brown	1,850 00
Hyatt & Spencer	1,480 00
George H. Creed	*1,380 00
S. A. Wheelwright	1,550 00
Thomas Poultney	1,500 00

Class No. 44. Tin:

David Babcock & Co	296 25
A. P. Brown	337 25
Hyatt & Spencer	352 50
George H. Creed	309 00
S. A. Wheelwright	*241 00
Thomas Poultney	337 25

Class No. 56. White lead:

David Babcock & Co	1,050 00
A. P. Brown	1,100 00
Hyatt & Spencer	1,000 00
George H. Creed	*900 00
S. A. Wheelwright	990 00
Walton Brothers	1,000 00
Harrison Bros. & Co	1,000 00
George N. Gardner	975 00
Thomas Poultney	1,150 00

Class No 57. Zinc paint:

David Babcock & Co	680 00
A. P. Brown	1,040 00
Hyatt & Spencer	640 00
George H. Creed	*560 00
S. A. Wheelwright	712 00
Walton Brothers	640 00
Harrison Bros. & Co	600 00
Thomas Poultney	680 00

Class No. 58. Colored paints, &c.

David Babcock & Co	1,352 60
A. P. Brown	2,413 00
Hyatt & Spencer	1,162 85
George H. Creed	*987 00
S. A. Wheelwright	1,244 43
Walton Bros	1,215 50
Harrison Bros. & Co	1,055 30
Thomas Poultney	1,188 20

Class No. 59. Linseed-oil:

David Babcock & Co	$3,360 00
A. P. Brown	3,465 00
Hyatt & Spencer	3,430 00
George H. Creed	*3,115 00
J. W. Buker	3,675 00
S. A. Wheelwright	3,360 00
George N. Gardner	3,491 25
Thomas Poultney	3,465 00

Class No. 60. Varnish, spirits turpentine:

David Babcock & Co	1,115 00
A. P. Brown	1,598 00
Hyatt & Spencer	1,100 40
George H. Creed	*992 00
S. A. Wheelwright	1,121 00
Walton Bros	1,072 00
Thomas Poultney	1,114 00

Class No. 64. Tallow, soap:

David Babcock & Co	127 00
Hyatt & Spencer	122 00
George H. Creed	*101 00
L. D. Jenard	126 00
S. A. Wheelwright	113 50

Class No. 65. Fish-oil:

David Babcock & Co	130 00
Hyatt & Spencer	104 00
George H. Creed	98 00
J. W. Buker	120 00
L. D. Jenard	120 00
S. A. Wheelwright	*90 00
Thomas Poultney	96 00

Class No. 69. Brushes:

A. P. Brown	1,125 00
Hyatt & Spencer	716 15
George H. Creed	*600 00
S. A. Wheelwright	766 00

Class No. 70. Dry goods:

A. P. Brown	1,588 44
Hyatt & Spencer	*701 05
George H. Creed	701 90
J. W. Buker	789 45

Class No. 71. Stationery:

William H. Dempsey	366 95*
William Ballantyne	369 03
Warren Choate & Co	*344 90
T. Newton Kurtz	356 62

Class No. 73. Ship-chandlery:

David Babcock & Co	1,258 60
A. P. Brown	2,492 50
Hyatt & Spencer	1,061 00
George H. Creed	*907 20
L. D. Jenard	1,096 00

* Accepted.

Class No. 85. Anthracite coal:

David Babcock & Co...	$7,163 00
Samuel G. French.....	6,874 00
A. P. Brown.....	8,775 00
Hyatt & Spencer.....	7,320 00
George H. Creed.....	*6,450 00
Walton Bros.....	†6,440 00
R. T. Heiston.....	7,792 50
James Symington.....	7,747 00
Audenried, Norton & Co.	9,050 00

Class No. 86. Semi-bituminous coal:

David Babcock & Co....	3,948 00
Samuel G. French.....	$3,810 00
A. P. Brown.....	4,734 00
Hyatt & Spencer.....	3,900 00
George H. Creed.....	3,900 00
Walton Bros.....	3,990 00
Berwind & Bradley.....	*3,654 00
James Symington.....	3,864 00
Josiah M. Bacon	3,990 00

Class No. 88. Charcoal:

David Babcock & Co...	1,200 00
Samuel G. French.....	*1,090 00
Hyatt & Spencer.....	1,230 00
George H. Creed.....	1,200 00

Opened in presence of—
I. HANSCOM, *Chief of Bureau.*
H. A. GOLDSBOROUGH, *Chief Clerk.*
B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, *May* 7, 1874.

Offers to furnish material for the Navy under the advertisement of the Bureau of Construction and Repair of April 6, 1874, *at the navy-yard, Philadelphia, Pa.*

Class No. 13. White-pine plank, boards:

A. P. Brown.....	$5,011 50
Southard & Co.....	4,575 00
L. Thompson & Co.....	4,522 50
J. W. Gaskill & Sons....	*3,760 50
Watson & Pittinger....	4,471 50
Trickey & Jewett.....	5,027 50
Joseph W. Duryee.....	4,098 00

Class No. 15. White-ash, elm, beech:

A. P. Brown	1,348 50
Southard & Co.....	891 25
L. Thompson & Co.....	*744 00
J. W. Gaskill & Sons....	826 50
Watson & Pittinger.....	1,007 50
Trickey & Jewett.....	855 00
Joseph W. Duryee.....	790 50

Class No. 16. White-ash oars:

A. P. Brown	400 00
J. W. Gaskill & Sons....	220 00
David Babcock & Co....	*170 00
J. W. Buker	180 00

Class No. 18. Black-walnut, mahogany, &c.:

A. P. Brown	735 00
Southard & Co.....	685 00
L. Thompson & Co	*‡500 00
J. W. Gaskill & Sons....	543 50
Watson & Pittinger.....	705 00
Trickey & Jewett.....	530 00
Joseph W. Duryee.....	‡500 00

Class No. 35. Steel:

A. P. Brown.....	$626 06
David Babcock & Co....	914 25
Hyatt & Spencer	*572 40
J. W. Buker	638 00
George H. Creed.....	601 75
S. A. Wheelwright.....	626 06
Walton Bros.....	†566 55
Thomas Poultney	596 25
William Baldwin.....	596 25
Morton, Reed & Co	624 07

Class No. 38. Iron wrought nails:

Paul J. Field.....	97 50
Hyatt & Spencer.....	39 00
J. W. Buker	60 00
George H. Creed.....	120 00
Thomas Poultney.....	*18 37
J. H. Wainwright.....	20 40

Class No. 39. Iron cut nails:

Paul J. Field.....	263 50
Hyatt & Spencer.....	243 00
J. W. Buker	288 00
George H. Creed.....	237 75
S. A. Wheelwright.....	245 70
Thomas Poultney.....	*235 40
J. H. Wainwright	290 00

Class No. 43. Zinc:

A. P. Brown	1,387 50
David Babcock & Co....	1,200 00
Hyatt & Spencer.....	*1,122 00
J. W. Buker	1,312 50

*Accepted. †Bid withdrawn. ‡Decided by lot.

George H. Creed	$1,140 00
S. A. Wheelwright	1,215 00
Thomas Poultney	1,185 00

Class No. 48. Locks, hinges, &c.:

Paul J. Field	304 75
Hyatt & Spencer	171 50
J. W. Buker	*150 00
George H. Creed	201 00

Class No. 49. Screws:

A. P. Brown	1,603 87
Paul J. Field	1,035 79
Hyatt & Spencer	*$946 66
J. W. Buker	1,212 63
George H. Creed	961 52
S. A. Wheelwright	1,234 61
Walton Bros	1,164 41
Morton, Reed & Co	1,369 37

Class No. 50. Files:

A. P. Brown	922 97
Paul J. Field	875 77
Hyatt & Spencer	790 07
J. W. Buker	*743 70
George H. Creed	753 62
S. A. Wheelwright	798 22
Walton Bros	794 68
Morton, Reed & Co	1,078 21

Class No. 51. Augers:

Paul J. Field	498 95
Hyatt & Spencer	446 29
J. W. Buker	484 00
George H. Creed	*419 21
Walton Bros	522 00
Thomas Poultney	446 10

Class No. 53. Tools for yard use:

Paul J. Field	2,421 26
Hyatt & Spencer	1,577 41
J. W. Buker	*1,446 90

Class No. 54. Hardware:

Paul J. Field	1,551 20
Hyatt & Spencer	1,345 11
J. W. Buker	1,572 00
George H. Creed	*1,298 00

Class No. 56. White lead:

A. P. Brown	1,100 00
David Babcock & Co	1,100 00
George H. Creed	*925 00
S. A. Wheelwright	1,000 00
Walton Bros	1,000 00
Harrison Bros. & Co	950 00
Thomas Poultney	1,150 00
H. H. Corbin	1,200 00
Hyatt & Spencer	987 50
J. W. Buker	1,100 00

Class No. 58. Colored paints, dryers:

David Babcock & Co	$544 50
Hyatt & Spencer	393 16
J. W. Buker	570 50
George H. Creed	365 75
S. A. Wheelwright	480 50
Walton Bros	420 65
Harrison Bros. & Co	*363 50
Thomas Poultney	489 25
H. H. Corbin	421 75

Class No. 59. Linseed-oil:

A. P. Brown	880 00
David Babcock & Co	784 00
Hyatt & Spencer	792 00
J. W. Buker	880 00
George H. Creed	*720 00
S. A. Wheelwright	768 00
Thomas Poultney	800 00
H. H. Corbin	800 00

Class No. 60. Varnish, spirits turpentine:

David Babcock & Co	715 00
Hyatt & Spencer	650 05
J. W. Buker	870 00
George H. Creed	*627 50
S. A. Wheelwright	675 75
Walton Bros	657 00
Thomas Poultney	652 50
H. H. Corbin	772 50

Class No. 63. Sperm and lard oil:

A. P. Brown	562 50
David Babcock & Co	495 00
Hyatt & Spencer	485 00
J. W. Buker	450 00
George H. Creed	*400 00
S. A. Wheelwright	525 00
Thomas Poultney	500 00

Class No. 68. Glass.

A. P. Brown	547 50
Hyatt & Spencer	*332 88
George H. Creed	430 50
Walton Bros	454 50
H. H. Corbin	469 25

Class No. 69. Brushes:

Hyatt & Spencer	543 77
J. W. Buker	512 80
George H. Creed	*462 33
H. H. Corbin	888 00

Class No. 70. Dry goods for upholstering:

Paul J. Field	335 48
Hyatt & Spencer	*280 45
J. W. Buker	305 00
George H. Creed	356 50

*Accepted.

Class No. 71. Stationery:

William H. Dempsey	$197 50
William Ballantyne	216 85
Warren Choate & Co	*179 74
T. Newton Kurtz	207 47

Class No. 72. Crucibles:

A. P. Brown	570 00
Paul J. Field	402 80
David Babcock & Co	625 00
Hyatt & Spencer	*357 80
J. W. Buker	483 00
George H. Creed	460 00
Walton Bros	450 00
Ross & Hoferkamp	450 00
Straw, Wile & Co	405 00

Class No. 73. Ship-chandlery:

Paul J. Field	276 00
David Babcock & Co	297 60
Hyatt & Spencer	*260 35
J. W. Buker	286 00
George H. Creed	265 50

Class No. 74. Acids:

Hyatt & Spencer	973 56
Wilson, Hood & Co	1,172 25
J. W. Buker	*692 90

Class No. 75. Rosin, pitch, &c.:

David Babcock & Co	180 00
Hyatt & Spencer	*162 00
J. W. Buker	237 50
A. P. Brown	225 00

Class No. 77. Belting, packing:

Hyatt & Spencer	*800 89
J. W. Buker	$846 [illegible]
S. A. Wheelwright	1,106 50
Walton Bros	1,398 40
William A. Torrey & Co.	1,392 [illegible]

Class No. 85. Anthracite coal:

A. P. Brown	3,050 [illegible]
Hyatt & Spencer	*2,433 25
Walton Bros	3,458 [illegible]
Plaisted & McCollin	2,638 35
William F. Moody	2,577 50
R. T. Heiston	2,565 [illegible]
James Symington	2,713 [illegible]

Class No. 86. Semi-bituminous coal:

A. P. Brown	790 [illegible]
Hyatt & Spencer	555 [illegible]
Walton Bros	665 [illegible]
Berwind & Bradley	*520 [illegible]
Plaisted & McCollin	613 [illegible]
William F. Moody	525 [illegible]
James Symington	573 [illegible]

Class No. 87. Bituminous coal:

A. P. Brown	2,097 [illegible]
Hyatt & Spencer	1,725 [illegible]
L. W. Guinand	1,938 [illegible]
Walton Bros	1,995 [illegible]
Berwind & Bradley	*1,650 [illegible]
Plaisted & McCollin	1,944 [illegible]
William F. Moody	1,875 [illegible]
H. C. Winship	1,695 [illegible]
James Symington	1,845 [illegible]

Class No. 88. Charcoal:

Paul J. Field	390 [illegible]
Hyatt & Spencer	*375 [illegible]
Walton Bros	†350 [illegible]

Opened in presence of—
I. HANSCOM, *Chief of Bureau.*
H. A. GOLDSBOROUGH, *Chief Clerk.*
B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, *May* 7, 1874.

Offers to furnish material for the Navy under the advertisement of the Bureau of Construction and Repair of April 6, 1874, *at the nary-yard, Washington, D. C.*

Class No. 23. Black-spruce:

J. W. Gaskill & Sons	$770 00
J. W. Buker	1,370 00
A. P. Brown	612 00
Watson & Pittinger	676 00
Trickey & Jewett	1,370 00
R. J. Neely	*419 00

Class No. 33. Wrought iron, flat:

J. W. Buker	$83 [illegible]
A. P. Brown	148 [illegible]
Hyatt & Spencer	79 [illegible]
Thomas Poultney	*63 [illegible]
Catasauqua Manufacturing Co	77 [illegible]

*Accepted.

†Bid withdrawn.

Class No. 35. Steel:

David Babcock & Co....	$1,158 05
J. W. Buker	779 00
A. P. Brown	780 42
Hyatt & Spencer.....	*723 81
George P. Goff	797 16
S. A. Wheelwright	795 50
Walton Bros.....	719 33
Thomas Poultney.....	736 88
William Baldwin	755 25
Morton, Reed & Co.....	790 50

Class No. 37. Iron spikes:

J. W. Buker	276 00
A. P. Brown	368 00
Hyatt & Spencer.....	*241 50
George P. Goff	322 00
S. A. Wheelwright	336 75
Thomas Poultney	275 25
J. H. Wainwright	299 00
Morton, Reed & Co.....	299 00

Class No. 42. Lead, pipe, sheet:

David Babcock & Co....	484 50
J. W. Buker	569 00
A. P. Brown	561 00
Hyatt & Spencer.....	439 87
George P. Goff	497 25
S. A. Wheelwright	453 90
Thomas Poultney	*438 60

Class No. 43. Zinc:

David Babcock & Co....	56 25
J. W. Buker	60 00
A. P. Brown	60 00
Hyatt & Spencer	53 45
S. A. Wheelwright	50 00
Thomas Poultney.....	*49 50

Class No. 48. Locks, hinges, &c.:

J. W. Buker	767 70
A. P. Brown	933 10
Hyatt & Spencer.....	*763 51

Class No. 49. Screws:

J. W. Buker	543 25
A. P. Brown	845 00
Hyatt & Spencer.....	*536 90
George P. Goff	713 65
S. A. Wheelwright	743 30
Walton Bros.....	740 61
Morton, Reed & Co.....	900 75

Class No. 50. Files:

J. W. Buker	*477 85
A. P. Brown	656 75
Hyatt & Spencer.....	509 80
George P. Goff	498 97
S. A. Wheelwright	534 58
Walton Bros.....	523 40
George B. Curtis.....	576 06
Morton, Reed & Co.....	710 32

*Accepted.

Class No. 53. Tools for yard use:

David Babcock & Co....	$230 00
J. W. Buker	*131 40
Hyatt & Spencer.....	188 42

Class No. 54. Hardware:

David Babcock & Co....	1,190 55
J. W. Buker	1,091 69
A. P. Brown	1,448 11
Hyatt & Spencer	965 72
Thomas Poultney.....	*917 85

Class No. 56. White lead:

David Babcock & Co....	625 00
J. W. Buker.....	550 00
A. P. Brown	650 00
Hyatt & Spencer.....	568 75
S. A. Wheelwright	*537 50
Walton Bros.....	575 00
Harrison Bros. & Co	554 50
Thomas Poultney	575 00

Class No. 57. Zinc paint:

David Babcock & Co....	345 00
J. W. Buker	*270 00
A. P. Brown	375 00
Hyatt & Spencer	315 00
S. A. Wheelwright	315 00
Walton Bros.....	300 00
Harrison Bros. & Co	330 00
Thomas Poultney	345 00

Class No. 58. Colored paints, driers:

David Babcock & Co....	342 50
J. W. Buker	373 00
A. P. Brown	597 50
Hyatt & Spencer	*270 00
S. A. Wheelwright	276 88
Walton Bros.....	280 65
Harrison Bros. & Co	290 00
Thomas Poultney	301 25

Class No. 60. Varnish, spirits turpentine:

David Babcock & Co....	295 50
J. W. Buker	348 00
Hyatt & Spencer	*287 75
A. Wheelwright	303 20
Walton Bros.....	†274 50
Thomas Poultney	290 70

Class No. 63. Sperm and lard oil:

David Babcock & Co....	245 00
J. W. Buker	225 00
A. P. Brown	312 50
Hyatt & Spencer	230 00
S. A. Wheelwright	235 00
Thomas Poultney	*207 50

†Bid withdrawn.

Class No. 68. Glass:

J. W. Buker	$350 40
A. P. Brown	393 85
Hyatt & Spencer	*299 00
George P. Goff	346 85
Walton Bros	371 70

Class No. 69. Brushes:

J. W. Buker	*298 00
Hyatt & Spencer	299 30
S. A. Wheelwright	312 10

Class No. 70. Dry goods for upholstering:

J. W. Buker	266 00
A. P. Brown	330 00
Hyatt & Spencer	*259 25
George P. Goff	396 14

Class No. 71. Stationery:

William H. Dempsey	*481 07
William Ballantyne	489 45
Warren Choate & Co	487 56
T. Newton Kurtz	†463 69

Class No. 73. Ship-chandlery:

David Babcock & Co	1,421 17
J. W. Buker	*1,180 80
Hyatt & Spencer	1,279 82

Class No. 87. Bituminous coal:

J. W. Buker	$7,500 00
A. P. Brown	4,890 00
William E. Griffith	*4,200 00
Hyatt & Spencer	4,900 00
Stephenson & Bro	4,890 00
L. W. Guinand	4,770 00
Walton Bros	6,650 00
R. T. Heiston	4,575 00
H. C. Winship	4,530 00
James Symington	4,980 00

Class No. 88. Charcoal:

William T. Clarke	*270 00
J. W. Buker	600 00
A. P. Brown	810 00
Hyatt & Spencer	780 00
L. W. Guinand	330 00
Walton Bros	750 00
Arthur Fowler	720 00

Class No. 89. Wood:

David Babcock & Co	586 50
J. W. Buker	466 65
A. P. Brown	637 50
Stephenson & Bro	501 50
L. W. Guinand	*347 65
Walton Bros	1,360 00
Arthur Fowler	445 40
R. T. Heiston	382 50

Opened in presence of—
I. HANSCOM, *Chief of Bureau.*
H. A. GOLDSBOROUGH, *Chief Clerk.*
B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, *May* 7, 1874.

Offers to furnish material for the Navy, under the advertisement of the Bureau of Construction and Repair of April 6, 1874, *at the navy-yard, Norfolk, Va.:*

Class No. 1. White-oak logs:

A. P. Brown	$11,340 00
William White	7,920 00
Southard & Co	8,082 00
J. M. Richardson	10,800 00
Mann & Co	9,720 00
Watson & Pittinger	11,520 00
A. A. McCullough	11,700 00
Trickey & Jewett	9,000 00
Richard Fentress	8,550 00
A. H. Lindsay	*7,110 00
R. J. Neely	7,447 50

Class No. 13. White-pine plank, boards:

A. P. Brown	2,200 00
J. W. Gaskill & Sons	2,187 50
Southard & Co	2,075 00
Watson & Pittinger	2,350 00
A. A. McCullough	2,125 00
Trickey & Jewett	2,500 00
R. J. Neely	*1,974 50

Class No. 15. White ash, &c.:

A. P. Brown	$1,722 60
J. W. Gaskill & Sons	1,255 80
Watson & Pittinger	1,240 50
A. A. McCullough	1,142 70
Trickey & Jewett	1,143 00
Richard Fentress	1,188 00
R. J. Neely	1,271 00
Joseph W. Duryee	*1,089 00

Class No. 18. Black walnut, mahogany, &c.:

A. P. Brown	140 00
J. W. Gaskill & Sons	105 00
Watson & Pittinger	160 00
A. A. McCullough	*96 00
Trickey & Jewett	120 00
R. J. Neely	119 00
Joseph W. Duryee	100 00

*Accepted.

† Received too late.

Class No. 22. Cypress, cedar:

A. P. Brown	$750 00
J. W. Gaskill & Sons	*142 00
J. W. Buker	192 00
Watson & Pittinger	255 00
A. A. McCullough	207 00
Trickey & Jewett	150 00
R. J. Neely	207 00

Class No. 25. Lignumvitæ:

A. P. Brown	232 50
J. W. Buker	327 50
George P. Goff	*170 00
Watson & Pittinger	775 00
A. A. McCullough	357 50
Trickey & Jewett	300 00
R. J. Neely	320 00

Class No. 32. Wrought-iron, round and square:

A. P. Brown	2,632 50
J. W. Buker	1,950 00
E. V. White & Co	1,846 75
Hyatt & Spencer	1,511 00
George P. Goff	1,867 50
Walton Brothers	1,544 03
Thomas Poultney	*1,302 00
Catasauqua Manufacturing Co	1,492 50

Class No. 33. Wrought-iron, flat:

A. P. Brown	1,371 50
J. W. Buker	1,055 00
Hyatt & Spencer	856 50
George P. Goff	1,105 75
Walton Bros	908 78
Thomas Poultney	856 50
Catasauqua Manufacturing Co	*836 50

Class No. 35. Steel:

David Babcock & Co	276 00
A. P. Brown	204 00
J. W. Buker	182 00
Hyatt & Spencer	172 80
George P. Goff	156 00
S. A. Wheelwright	*134 75
Walton Bros	160 00
Thomas Poultney	142 00
Morton, Reed & Co	188 40

Class No. 37. Iron spikes:

A. P. Brown	342 00
J. W. Buker	259 00
Hyatt & Spencer	*199 50
George P. Goff	268 50
S. A. Wheelwright	272 50
Thomas Poultney	229 75
J. H. Wainwright	247 00
Morton, Reed & Co	247 00

Class No. 39. Iron cut nails:

J. W. Buker	$186 00
Hyatt & Spencer	213 75
George P. Goff	133 50
S. A. Wheelwright	219 50
Thomas Poultney	*132 25
J. H. Wainwright	218 05

Class No. 42. Lead, pipe, sheet:

David Babcock	190 00
A. P. Brown	240 00
J. W. Buker	240 00
Hyatt & Spencer	*172 50
George P. Goff	195 00
S. A. Wheelwright	180 00
E. B. Lookins	260 00
Thomas Poultney	180 00

Class No. 43. Zinc:

David Babcock & Co	3,280 00
A. P. Brown	3,900 00
J. W. Buker	3,200 00
Hyatt & Spencer	*3,040 00
George P. Goff	3,160 00
Thomas Poultney	3,160 00

Class No. 44. Tin:

David Babcock & Co	693 75
A. P. Brown	1,325 00
J. W. Buker	975 00
Hyatt & Spencer	662 50
George P. Goff	712 50
S. A. Wheelwright	*612 50
Thomas Poultney	825 00

Class No. 48. Locks, hinges, &c.:

J. W. Buker	165 00
Hyatt & Spencer	*110 55
George P. Goff	130 50
E. B. Lookins	258 00

Class No. 49. Screws:

J. W. Buker	96 95
E. V. White & Co	118 00
Hyatt & Spencer	*71 84
George P. Goff	98 10
S. A. Wheelwright	90 64
Walton Bros	86 11
Thomas Poultney	84 16
Morton, Reed & Co	110 27

Class No. 50. Files:

A. P. Brown	973 25
J. W. Buker	915 20
E. V. White & Co	1,037 21
Hyatt & Spencer	859 12
George P. Goff	738 05
S. A. Wheelwright	867 71
E. B. Lookins	*716 50
Walton Bros	825 32
George B. Curtis	934 00
Morton, Reed & Co	1,158 45

* Accepted.

Class No. 51. Augers:

David Babcock & Co....	$446 85
J. W. Buker.....	455 00
E. V. White & Co.....	500 31
Hyatt & Spencer.....	410 67
George P. Goff.....	*408 00
Walton Bros.....	476 55
Thomas Poultney.....	415 20

Class No. 53. Tools for yard use:

David Babcock & Co....	202 50
J. W. Buker.....	171 60
Hyatt & Spencer.....	*150 00
George P. Goff.....	207 00
E. B. Lookins.....	222 00

Class No. 54. Hardware:

J. W. Buker.....	*249 50
Hyatt & Spencer.....	335 65
E. B. Lookins.....	440 50
David Babcock & Co....	402 05

Class No. 56. White lead:

David Babcock & Co....	990 00
A. P. Brown.....	970 00
J. W. Buker.....	910 00
E. V. White & Co.....	950 00
Hyatt & Spencer.....	853 75
George P. Goff.....	1,040 00
S. A. Wheelwright.....	830 00
E. B. Lookins.....	870 00
Walton Bros.....	845 00
Harrison Bros. & Co....	*826 60
Thomas Poultney.....	855 00

Class No. 57. Zinc paint:

David Babcock & Co...	990 00
A. P. Brown.....	960 00
J. W. Buker.....	815 00
E. V. White & Co.....	900 00
Hyatt & Spencer.....	752 50
George P. Goff.....	1,040 00
S. A. Wheelwright.....	797 50
E. B. Lookins.....	885 00
Walton Bros	†700 00
Harrison Bros. & Co....	*751 00
Thomas Poultney.....	790 00

Class No. 58. Colored paints, driers:

A. P. Brown.....	86 25
J. W. Buker.....	72 50
Hyatt & Spencer.....	36 25
S. A. Wheelwright.....	51 25
Walton Bros.....	55 90
Harrison Bros. & Co.....	*35 00
Thomas Poultney.....	47 50

Class No. 60. Varnish, spirits turpentine:

David Babcock & Co....	211 50
A. P. Brown.....	250 00
J. W. Buker.....	*$137 50
Hyatt & Spencer.....	187 50
S. A. Wheelwright.....	185 00
Walton Bros.....	187 50
Thomas Poultney.....	210 00

Class No. 69. Brushes:

J. W. Buker.....	*184 00
E. V. White & Co.....	331 00
Hyatt & Spencer.....	192 10
George P. Goff.....	325 91
S. A. Wheelwright.....	255 50

Class No. 71. Stationery:

William H. Dempsey....	323 75
E. B. Lookins.....	614 20
William Ballantyne.....	327 53
Warren Choate & Co....	*279 23
T. Newton Kurtz.....	307 92

Class No. 73. Ship-chandlery:

J. W. Buker.....	*131 50
David Babcock & Co....	183 50
Hyatt & Spencer.....	194 75
George P. Goff.....	208 00
A. A. McCullough.....	204 00
E. B. Lookins.....	270 00

Class No. 77. Belting, packing:

David Babcock & Co....	365 70
J. W. Buker.....	302 50
E. V. White & Co.....	384 10
Hyatt & Spencer.....	*255 63
S. A. Wheelwright.....	332 80
E. B. Lookins.....	461 50
Walton Bros.....	301 56
William A. Torrey & Co.	272 35
Thomas Poultney.....	334 35

Class No. 78. Leather:

J. W. Buker.....	*192 80
Hyatt & Spencer.....	203 80
E. B. Lookins.....	251 00
William A. Torrey & Co.	210 50

Class No. 86. Anthracite coal:

David Babcock & Co....	*1,116 00
A. P. Brown.....	1,548 00
Hyatt & Spencer.....	1,398 00
L. W. Guinand.....	1,390 00
Walton Bros.....	1,330 00
R. J. Neely.....	1,270 00
James Symington.....	1,262 00
Audenreid, Norton & Co.	1,260 00

Class No. 87. Bituminous coal:

David Babcock & Co....	5,450 00
A. P. Brown.....	5,890 00
Hyatt & Spencer.....	6,150 00
L. W. Guinand.....	5,750 00
A. A. McCullough.....	5,540 00

* Accepted.

† Bid withdrawn.

Walton Bros	$6,650 00
R. T. Heiston	5,390 00
H. C. Winship	*5,200 00
Alexander Ray	5,330 00
R. J. Neely	5,790 00
James Symington	5,740 00
Robert Mowe	6,060 00

Class No. 88. Charcoal:

J. W. Buker	$1,000 00
E. V. White & Co	1,115 00
Hyatt & Spencer	1,120 00
A. A. McCullough	*980 00
E. B. Lookins	1,600 00

Opened in presence of—
I. HANSCOM, *Chief of Bureau.*
H. A. GOLDSBOROUGH, *Chief Clerk.*
B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, *May* 7, 1874.

Offers to furnish material for the Navy, under the advertisement of the Bureau of Construction and Repair of April 6, 1874, at the navy-yard, Mare Island, Cal.

Class No. 32. Wrought iron, round and square:

Hyatt & Spencer	$1,168 00
Farwell & Co	*1,025 00
A. P. Brown	1,950 00
Van Winkle & Davenport	1,170 00

Class No. 33. Wrought iron, flat:

Hyatt & Spencer	887 00
Farwell & Co	*677 50
A. P. Brown	1,267 50
Van Winkle & Davenport	805 00

Class No. 43. Zinc:

Hyatt & Spencer	1,000 00
Farwell & Co	*800 00
A. P. Brown	1,200 00
David Babcock & Co	840 00
Van Winkle & Davenport	1,000 00

Class No. 44. Tin:

Hyatt & Spencer	760 00
Farwell & Co	*640 00
A. P. Brown	1,060 00
David Babcock & Co	725 00

Class No. 48. Locks, hinges, &c.:

Hyatt & Spencer	55 20
Farwell & Co	*22 72

Class No. 49. Screws:

Hyatt & Spencer	705 88
Farwell & Co	*643 70
A. P. Brown	1,385 00
Van Winkle & Davenport	998 14

Class No. 50. Files:

Hyatt & Spencer	$240 00
Farwell & Co	*212 50
A. P. Brown	580 00

Class No. 51. Augers:

Hyatt & Spencer	728 65
Farwell & Co	*661 75
A. P. Brown	2,214 00

Class No. 53. Tools for yard use:

Hyatt & Spencer	418 60
Farwell & Co	*391 05

Class No. 54. Hardware:

Hyatt & Spencer	603 80
Farwell & Co	*544 90

Class No. 56. White lead:

F. B. Taylor & Co	318 50
Farwell & Co	297 70
Sullivan, Kelley & Co	*260 00
Whittier, Fuller & Co	312 00
A. P. Brown	416 00

Class No. 57. Zinc paint:

F. B. Taylor & Co	150 00
Farwell & Co	141 25
Sullivan, Kelley & Co	*105 00
Whittier, Fuller & Co	180 00
A. P. Brown	255 00

Class No. 58. Colored paints, dryers:

F. B. Taylor & Co	371 50
Hyatt & Spencer	599 50
Farwell & Co	*285 45
Sullivan, Kelley & Co	293 20
Whittier, Fuller & Co	406 00
A. P. Brown	972 00

*Accepted.

Class No. 60. Varnish, spirits turpentine:

F. B. Taylor & Co	$200 00
Hyatt & Spencer	237 50
Farwell & Co	*147 50
Sullivan, Kelley & Co	150 00
Whittier, Fuller & Co	180 00
A. P. Brown	312 50

Class No. 63. Sperm oil:

F. B. Taylor & Co	210 00
Hyatt & Spencer	350 00
Farwell & Co	179 00
Sullivan, Kelley & Co	*150 00
Whittier, Fuller & Co	190 00
A. P. Brown	250 00

Class No. 65. Fish-oil:

F. B. Taylor & Co	25 00
Hyatt & Spencer	100 00
Farwell & Co	19 50
Sullivan, Kelley & Co	*17 50
Whittier, Fuller & Co	25 00

Class No. 69. Brushes:

F. B. Taylor & Co	241 50
Hyatt & Spencer	257 00
Farwell & Co	*175 00
Sullivan, Kelley & Co	250 00
Whittier, Fuller & Co	281 50

Class No. 71. Stationery:

William H. Dempsey	$637 68
L. H. Bonestall	*411 60
William Ballantyne	432 48

Class No. 73. Ship-chandlery:

Hyatt & Spencer	825 00
Farwell & Co	*509 00

Class No. 77. Belting, packing:

Hyatt & Spencer	1,512 50
Farwell & Co	1,249 50
William A. Torrey & Co.	*1,104 50
H. N. Cook	1,372 50

Class No. 78. Leather:

Hyatt & Spencer	165 00
Farwell & Co	*106 00
H. N. Cook	45 00

Class No. 85. Anthracite coal:

Farwell & Co	3,440 00
A. P. Brown	3,963 20
David Babcock & Co	3,348 80
James Symington	*3,158 40

Class No. 87. Bituminous coal:

Farwell & Co	*3,150 00
A. P. Brown	3,715 50
David Babcock & Co	3,930 00

Opened in presence of—
I. HANSCOM, *Chief of Bureau.*
H. A. GOLDSBOROUGH, *Chief Clerk.*
B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, *May* 7, 1874.

No. 11.

MARINE CORPS.

HEADQUARTERS MARINE CORPS,
Washington, D. C., October 24, 1874.

SIR: I have the honor to report to the Department that at the usual inspections of the corps during the past year the troops at the several stations were found in excellent order, and their discipline and efficiency all that could be desired. The barracks and other public property under their immediate charge were also found in their usual good condition, and will require nothing during the coming year but the ordinary attention and repairs provided by the annual appropriations to keep them so.

The old ship Saint Lawrence, so long used as a barracks at Norfolk, having been declared unfit for further use as such, a small temporary

* Accepted.

building has been erected in the navy-yard for the accommodation of the men at that station.

The change was a much-needed one, as well for the health and comfort of the men as for their discipline and military efficiency; for the time and labor necessary to keep a large ship in good order can now be employed in their proper military duties, drill, &c.

Congress, at its last session, having limited the appropriation for the support of the Marine Corps to 1,500 privates, all recruiting was immediately stopped, and that grade reduced by discharge to the number designated. As the complement of marines on board of vessels in commission still remains the same, this reduction had to be made from the several naval stations on shore. As may be supposed, this has left a very small number of men at each of these stations; a force in my opinion entirely inadequate to perform the duties required of it.

It is hardly necessary for me to say that the complement of marines on board vessels in commission should not, under any circumstances, be reduced below what it is at present; for, in the opinion of all our naval commanders the number should be rather increased than diminished. Nor is it necessary for me to call the attention of the Department to what has been so often recommended and urged by all naval commandants, that there should be a larger force of marines at our principal navy-yards to guard the immense amount of public property stored therein; to furnish well-drilled, effective men for the relief of guards returning from sea, and to be always in readiness for any emergency that could arise requiring the services of troops. It has always been considered that at New York, Boston, Philadelphia, and Norfolk, there should at all times be a force of at least 150 men in readiness for immediate service; yet with the corps up to its authorized standard, there is but one of these stations that could furnish 50 efficient troops for active service; while at the headquarters of the corps, the general depot for the instruction and drill of the young officers and recruits entering the service, scarcely 25 privates can be mustered at an ordinary company drill. It is manifestly impossible, with so small a force as this, to impart that military instruction and training so necessary to make a thorough soldier, and I regret that in some instances I am compelled to send new recruits to sea before they can acquire that experience and instruction so desirable to make them good, efficient soldiers on board ship. For these and other reasons not necessary to adduce, the late reduction has, in my judgment, operated injuriously to the service.

When we consider the vast amount of public property at our naval stations; the very great importance of having a body of well-disciplined and reliable troops at these important points, in readiness at all times for immediate service with the Navy or Army, or with the municipal or State authorities in any civil commotion where the presence of troops might be necessary, I cannot think that Congress would regard a force of at least 150 men at each of these stations as too great a number for the demands of the service. I therefore would respectfully and urgently recommend that the 500 men discharged in compliance with the desire of Congress may be again enlisted.

The estimates of the disbursing officers of the corps transmitted to the Department a few weeks ago have been prepared with this view, and I trust the Department may recommend the desired appropriation to restore to the service the men temporarily disbanded.

The yellow fever has again visited our most southern navy-yard, and the corps has to regret the loss of one of its most gallant young officers, Lieut. William B. Slack, and one-fifth of the enlisted men of the com-

mand. Fortunately, however, there were at the time but three officers and thirty-five enlisted men on duty at the station.

If it be the intention of the Government to maintain this naval station, some provision should be made to rebuild, on its former site, the barracks destroyed during the late rebellion, as the temporary building now used by the marines is, from its structure and location, unsuited for the purpose.

I am, very respectfully, your obedient servant,

J. ZEILIN,
Brigadier-General and Commandant.

Hon. GEO. M. ROBESON,
Secretary of the Navy.

HEADQUARTERS MARINE CORPS,
Paymaster's Office, August 29, 1874.

SIR: I have the honor to submit herewith estimates, in triplicate, for the pay of officers, non-commissioned officers, musicians, privates, and others of the United States Marine Corps, for the fiscal year ending June 30, 1876. These estimates exceed in amount the sum appropriated for the current fiscal year by $128,170, being for the pay of 500 privates, pay for "undrawn clothing," and for traveling allowance to officers, for which no appropriation was made for the present year.

I also submit estimates for deficiencies for the present fiscal year for "undrawn clothing," and for traveling allowance to officers.

I am, very respectfully, yours, &c.,

J. C. CASH,
Paymaster United States Marine Corps.

Brig. Gen. JACOB ZEILIN,
Commandant United States Marine Corps,
Headquarters.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876 by the Paymaster of the United States Marine Corps.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
PAY OF OFFICERS, NON-COMMISSIONED OFFICERS, MUSICIANS, PRIVATES, AND OTHERS OF THE UNITED STATES MARINE CORPS.		
1 brigadier-general, commandant	$5,500 00	
1 colonel	4,500 00	
2 lieutenant-colonels	8,000 00	
1 lieutenant-colonel retired	3,000 00	
4 majors, per act of June 30, 1834, (4 Stat. at L., p. 713, sec. 4, 5)	13,750 00	
2 majors, retired, per act of March 2, 1847, (9 Stat. at L., p. 155, sec. 3)	4,875 00	
1 adjutant and inspector, 1 quartermaster, and 1 paymaster, per act of August 5, 1854, (10 Stat. at L., p. 586, sec. 1.)	10,500 00	
2 assistant quartermasters, per act of February 21, 1857, (11 Stat. at L., p. 163, sec. 1.)	5,200 00	
assistant quartermaster, retired, per act of July 17, 1862, (12 Stat. at L., p. 594, sec. 2.)	2,100 00	
20 captains, per act of June 30, 1864, (13 Stat. at L., p. 144, sec. 1)	44,100 00	
4 captains, retired, per act March 3, 1865, (13 Stat. at L., p. 487, sec. 1)	6,615 00	
30 first lieutenants, per act July 28, 1866, (14 Stat. at L., p. 334, sec. 13)	52,500 00	
30 second lieutenants, per act of July 28, 1866, (14 Stat. at L., p. 337, sec. 37)	44,100 00	
2 second lieutenants, retired, per act March 2, 1867, (14 Stat. at L., p. 422, sec. 1.)	2,100 00	
1 leader of the band, per act of March 2, 1867, (14 Stat. at L., p. 517, sec. 7)	948 00	

Estimates of appropriations required for the fiscal year, &c.—Continued.

Detailed objects of expenditure and explanation.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
PAY OF OFFICERS, NON-COMMISSIONED OFFICERS, MUSICIANS, PRIVATES, AND OTHERS OF THE UNITED STATES MARINE CORPS—Continued.		
1 apothecary, per act July 15, 1870	750 00	
1 sergeant-major, 1 quartermaster-sergeant, and 1 drum-major, per act July 8, 1816.	1,080 00	
50 first sergeants, Navy Regulations	16,200 00	
140 sergeants	31,560 00	
180 corporals	35,400 00	
30 musicians of the band	9,996 00	
96 drummers and fifers	17,726 00	
2,000 privates	360,000 00	
9 clerks to brigadier-general, adjutant and inspector, quartermaster, and paymaster.	12,883 00	
1 messenger at headquarters	971 00	
1 clerk and 1 messenger at assistant quartermaster's office, Philadelphia	1,576 00	
Payments to discharged soldiers for clothing not drawn	25,000 00	
Allowance to officers traveling under orders without troops or supplies	8,000 00	
	728,930	$600,760

Respectfully submitted.

J. C. CASH,
Paymaster Marine Corps.

HEADQUARTERS MARINE CORPS, QUARTERMASTER'S OFFICE,
Washington, D. C., August 31, 1874.

SIR: I have the honor to submit herewith duplicate estimates of appropriations required for the service of the fiscal year ending 30th June, 1876, by the Quartermaster's Department, Marine Corps.

These estimates vary from those submitted for fiscal year ending 30th June, 1875, as follows:

Clothing, decreased	$12,769
Repair of barracks, increased	9,000
Hire of quarters, decreased	936
Forage, decreased	1,500

The aggregate amount of these estimates is $6,205 less than that asked in estimates of previous year. The increase for repair of barracks is based upon the report of boards of survey which have been held upon the public buildings at the several posts, and the estimates submitted as the probable cost of putting and keeping them in good condition.

I also inclose, in duplicate, estimates for deficiencies in appropriations for contingencies, fiscal year ending 30th June, 1874, and for hire of quarters for officers where there are no public quarters, and forage for public horses and the authorized number of officers' horses, for fiscal year ending 30th June, 1875.

Duplicate schedules of proposals received for rations, fuel, and supplies, current fiscal year, are also transmitted.

I am, very respectfully, your obedient servant,

W. B. SLACK,
Quartermaster Marine Corps.

Brig. Gen. JACOB ZEILIN,
Commandant Marine Corps,
Headquarters, Washington, D. C.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Quartermaster's Department, Marine Corps.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
PROVISIONS.		
1,333 non-commissioned officers, musicians, privates, and washerwomen 365 days, one ration per day, 486,545, at 25 cents per day, is	$121,636 25	$100,000 00
CLOTHING.		
2,500 non-commissioned officers, musicians, and privates, at $39.68 per annum, (actual cost per contract, 1874 and 1875,) is $99,200, and 1,000 watch-coats, at $9.51 each, is in all $108,710	108,710 00	100,000 00
FUEL.		
4,408 cords of wood, as follows: One brigadier-general, one colonel, two lieutenant-colonels, four majors, three staff-majors, twelve captains, two staff-captains, thirty first and second lieutenants, thirteen hundred and thirty-three non-commissioned officers, musicians, privates, and washerwomen, six hospitals, one armory, seven mess-rooms for officers, sixteen offices for commandant and staff and commanding officers at posts, eight rooms for officers of the day, ten guard-rooms at barracks and navy-yards, three clothing and other supply stores. One-fourth additional on 2,400 cords, quantity supposed to be required in latitude north 36 degrees from 1st September to 30th April, 600 cords, amounting to in all 4,408 cords, which, at $7 per cord, is	30,856 00	30,856 00
MILITARY STORES.		
Pay of mechanics, repair of arms, purchase of accoutrements, ordnance-stores, flags, drums, fifes, and other instruments	12,000 00	9,000 00
TRANSPORTATION AND RECRUITING.		
Transportation of troops, and for expenses of recruiting	12,000 00	5,000 00
REPAIR OF BARRACKS.		
Viz: Portsmouth, N. H., Boston, Mass., Brooklyn, N. Y., Philadelphia, Pa., Annapolis, Md., headquarters, Washington, D. C., navy-yard, Washington, D. C., Norfolk, Va., Pensacola, Fla., and Mare Island, California	21,000 00	6,000 00
HIRE OF QUARTERS.		
Hire of quarters for officers where there are no public buildings	17,064 00	10,000 00
FORAGE.		
Forage for public horses and the authorized number of officers' horses	6,000 00	3,000 00
CONTINGENCIES.		
For freight, ferriage, toll, cartage, purchase and repair of boats, per diem for constant labor, funeral expenses of marines, stationery, telegraphing, apprehension of deserters; oil, gas, candles; repair of gas and water fixtures; water-rent; barrack-furniture; furniture for Government houses and offices, packing-boxes, bed-sacks, wrapping-paper, oil-cloth, crash, rope, twine, carpenters' tools, tools for police purposes, purchase of fire-extinguishers, purchase and repair of hose, repairs to public carryall, purchase and repair of harness, purchase and repair of hand-carts and wheelbarrows, purchase and repair of cooking-stoves, ranges, &c., stoves where there are no grates; gravel, &c., for parade-grounds, repair of pumps, and for other purposes	40,000 00	20,000 00
PRINTING, ETC.		
For printing and binding, to be executed under the direction of the Congressional Printer, per act of May 8, 1872	5,000 00	.....
	374,266 25	283,856 00

Respectfully submi te l.

W. B. SLACK,
Quartermaster Marine Corps

DEFICIENCIES.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1875, by the Quartermaster's Department, Marine Corps.

Detailed objects of expenditure and explanations.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1875.
HIRE OF QUARTERS.		
Hire of quarters for officers where there are no public buildings	$7,064 00	$10,000 00
FORAGE.		
For public horses and for the authorized number of officers' horses	3,000 00	3,000 00

Respectfully submitted.

W. B. SLACK, *Quartermaster Marine Corps.*

Estimates of appropriations required for the service of the fiscal year ending June 30, 1874, by the Quartermaster's Department, Marine Corps.

Detailed objects of expenditure and explanations.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the fiscal year ending June 30, 1874.
CONTINGENCIES.		
For gas, water-rent, stationery, repairing stoves, brooms, buckets, and furniture at marine barracks, Brooklyn, N. Y	$2,555 63	.....

Respectfully submitted.

W. B. SLACK, *Quartermaster Marine Corps.*

Estimates of appropriations required for the service of the fiscal year ending June 30, 1871, by the Quartermaster's Department, Marine Corps.

Detailed objects of expenditure and explanations.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the fiscal year ending June 30, 1871.
CONTINGENT.		
For amount found due by the Fourth Auditor of the Treasury in settlement of claim of Francis Scala, late leader of the marine band, for commutation of quarters, as per letter attached	$757 80	.....

Respectfully submitted.

W. B. SLACK, *Quartermaster Marine Corps.*

TREASURY DEPARTMENT,
Fourth Auditor's Office, September 9, 1874.

SIR: In compliance with a request from the attorney in the case, you are informed that in the settlement of the claim of Francis Scala, late leader of the marine band, for commutation of quarters, it was found that the sum of $757.80 was due him, and that the amount should be paid from the appropriation contingent Marine Corps, 1870–71. That appropriation having been exhausted, the certificate cannot be issued until Congress shall have made provision for its payment.

Very respectfully,

S. J. W. TABOR, *Auditor.*

Maj. W. B. SLACK,
Quartermaster U. S. Marine Corps, Headquarters, Washington, D. C.

Abstract of offers received for furnishing rations, fuel, and supplies to the United States Marine Corps, under the cognizance of the Quartermaster's Department.

Offers for rations under advertisement dated April 28, 1874:

At Portsmouth, N. H.:

	Per hundred.
Jacob Baum	$33 00
John C. Gilbert	30 00
Peter Higgins	30 00
N. F. Mather	*29 50

At Charlestown, Mass.

Jacob Baum	32 50
John C. Gilbert	30 00
Peter Higgins	28 45
N. F. Mather	*28 30

At Brooklyn, N. Y.:

Jacob Baum	29 89
John C. Gilbert	*23 45
Peter Higgins	27 00
N. F. Mather	27 50

At Philadelphia, Pa.:

Jacob Baum	30 64
Philip Justus	22 43
Walter Reckless	*22 35

At Gosport, Va.:

	Per hundred.
Jacob Baum	$30 00
Kimberly Brothers	*23 14
David F. Keeling	23 20
N. F. Mather	29 20

At Annapolis, Md.:

Jacob Baum	28 90
John C. Gilbert	*20 85
Jackson Brewer	20 90
N. F. Mather	29 50

At Pensacola, Fla.:

Kimberly Brothers	40 00
T. C. Quayle	23 55
Hugh McHatton	25 22
N. F. Mather	*23 50

At Washington, D. C.:

Jacob Baum	28 45
H. W. Hall	*16 25
N. F. Mather	24 60

At Mare Island, Cal.:

N. F. Mather	*30 00

Offers for fuel under advertisement dated May 4, 1874:

At Portsmouth, N. H.:

	Wood, per cord.
N. F. Mather	$9 95
George A. Hammond	11 48
Samuel G. French	*9 10
Joseph L. Savage	11 60
C. E. Walker & Co	10 00
	Coal, per ton.
N. F. Mather	8 23
George A. Hammond	8 75
Samuel G. French	8 22
Joseph L. Savage	*7 95
C. E. Walker & Co	8 25
William H. Sise	9 49

At Charlestown, Mass.:

	Wood, per cord.
Samuel Knight	12 00
Howard Snelling	13 00
Samuel G. French	*8 95
Joseph L. Savage	10 80
	Coal, per ton.
Samuel Knight	$8 00
Howard Snelling	9 50
Samuel G. French	7 88
Joseph L. Savage	*7 85

At Brooklyn, N. Y.:

	Wood, per cord.
Chauncey M. Felt	$10 33
Samuel G. French	8 75
Joseph L. Savage	*8 70
	Coal, per ton.
Chauncey M. Felt	6 97
Samuel G. French	*6 44
Joseph L. Savage	7 65

At Philadelphia, Pa.:

	Wood, per cord.
Francis D. Watson	8 75
James J. Convery	7 79
Samuel G. French	8 75
Joseph L. Savage	*6 75
Walter Reckless	8 48
James Ballenger	7 75
	Coal, per ton.
James J. Convery	*5 68
Plaisted & McCollier	6 93
Samuel G. French	6 15
Joseph L. Savage	7 45
James Ballenger	7 75

* Accepted.

At Washington, D. C.:

	Wood, per cord.
John McElroy	$6 45
S. T. Suit	6 47
Charles W. King	6 09
Joseph L. Savage	*5 20
T. W. Brown	7 00
W. H. Barbour	6 84
T. E. Clark & Co	6 48

At Annapolis, Md.:

	Wood, per cord.
B. H. Classen	9 00
John Kealy	7 00
Sol. Philips	6 90
Joseph L. Savage	*6 40

At Washington, D. C.:

	Coal, per ton.
L. W. Guinand	6 54
John McElroy	6 95
Joseph L. Savage	*6 00
W. H. Barbour	6 98
T. E. Clark & Co	6 74

At Gosport, Va.:

	Wood, per cord.
Peters Brothers	$5 90
Robert J. Neely	*5 15
Joseph L. Savage	5 20

	Coal, per ton.
Peters Brothers	7 90
Robert J. Neely	7 48
Joseph L. Savage	*7 45

At Mare Island, Cal.:

	Wood, per cord.
N. F. Mather	16 00
James McCudden	*15 00

	Coal, per ton.
N. F. Mather	33 00
James McCudden	30 00
Samuel G. French	*20 20

At Pensacola, Fla.:

	Wood, per cord.
T. C. Quayle	5 97
Hugh McHatton	*5 92

Offers for supplies under advertisement dated May 1, 1874:

Class No. 1. Kerseys, &c.:

William I. Gregory	$37,536 00
L. & D. Yanney	31,454 00
Peter Higgins	37,460 00
Walton Brothers	33,060 00
Perry & Co	33,890 00
Tingue, House & Co	590 00
William Mathews	29,592 00
R. S. Allen	31,219 00

Class No. 2. Flannels, &c.:

William I. Gregory	10,588 00
L. & D. Yanney	9,424 00
Peter Higgins	12,908 80
Walton Brothers	12,028 00
Perry & Co	13,480 00
Tingue, House & Co	
William Mathews	11,960 00
R. S. Allen	*10,138 00

Class No. 3. Linens, &c.:

James Duncan & Co	†1,620 00
Peter Higgins	10,250 00
Walton Brothers	10,115 00
Perry & Co	10,550 00
William Mathews	**4,695 00
R. S. Allen	**3,810 00

Class No. 4. Uniform caps, &c.:

Bent & Bush	**1,597 00
Hartmann Bros. & Co	5,352 50
Walton Brothers	**$3,220 00
Perry & Co	5,253 00

Class No. 5. Military equipments:

Hartmann Bros. & Co	**827 10
Walton Brothers	**1,183 00
Perry & Co	2,249 95

Class No. 6. Bootees:

C. R. Williamson & Son	11,820 00
William McKnight	13,500 00
Walton Brothers	12,540 00
Perry & Co	13,200 00
Jacob Roedel & Son	*10,500 00

Class No. 7. Waist-belts, &c.:

Hartmann Bros. & Co	**1,935 50
Walton Brothers	**949 00
Perry & Co	3,169 90

Class No. 8. Making and trimming clothing:

Jacob Reed	20,940 50
Abraham Thorp	17,046 80
William F. Jobbins	20,873 80
Walton Brothers	44,050 00
Perry & Co	44,836 20
Bell, Rafferty & Co	61,435 00
William Mathews	20,757 00
R. S. Allen	*16,312 20

W. B. SLACK,
Quartermaster Marine Corps.

HEADQUARTERS MARINE CORPS, QUARTERMASTER'S OFFICE,
Washington, August 31, 1874.

* Accepted entire class. ** Accepted for part of a class. † For part of a class.

No. 12.

LANDING OF DETACHMENTS AT HONOLULU.

No. 9.] FLAG-SHIP RICHMOND, SAN FRANCISCO,
March 18, 1874.

SIR: I have the honor to inform you to-day by telegraph of the election of Kalakaua as king of the Sandwich Islands; also the landing of a detachment of seamen and marines from the United States steamships Tuscarora and Portsmouth, by direction of Commander Belknap, senior officer present, for the preservation of peace, the protection of American interests and foreign residents. These men were landed at the request of the authorities, through our minister resident.

A detachment was also landed from Her Britannic Majesty's steamship Tenedos.

The prompt appearance of these detachments restored order, prevented the shedding of blood, and the further destruction of property.

Subsequently, the government having made arrangements for the preservation of order, the detachments were withdrawn.

I inclose herewith copy of Captain Hopkins's report.

The Benicia arrived at Honolulu on the 27th ult., and will remain there until further orders.

Very respectfully, your obedient servant,

A. M. PENNOCK,
Rear-Admiral, Commanding United States Naval Force on North Pacific Station.

Hon. GEO. M. ROBESON,
Secretary of the Navy, Washington, D. C.

UNITED STATES STEAMER BENICIA, (2d rate,)
HONOLULU, HAWAIIAN ISLANDS,
March 5, 1874.

ADMIRAL, SIR: I have the honor to report the arrival from Panama, on the 26th ultimo, of the ship under my command, in obedience to your order dated Honolulu, H. I., November 12, 1873, making a passage of sixty-five days. Having crossed the line to the eastward of the Gallapagos Islands, I made as far as 3° 30′ south, encountering light airs from the southeast, and sailing at the rate of from one to two and a half knots per hour, until well to the northward of the line, which I recrossed in longitude 117° 30′ west.

Upon my arrival here, I found the United States steamer Tuscarora, Commander George E. Belknap, and the United States steamer Portsmouth, Commander Joseph S. Skerrett, at anchor. I heard of the death of His Majesty, the late King Lunalilo, whose body was still lying at the Jobani palace; and also of the riot occasioned by the election of his present Majesty King Kalakaua to the throne. Previous to my arrival, at the request of the minister of foreign affairs, through our minister resident, Hon. Henry A. Peirce, a detachment of men were landed by Commander George E. Belknap, senior officer present, from the United States steamer Tuscarora, and the United States steamer Portsmouth, for the preservation of the peace and the protection of the foreign residents, when the riot immediately ceased. A detachment was also landed from Her Britannic Majesty's ship Tenedos. I communicated with his

excellency the governor of Oahu, tendering the usual courtesies, which were accepted, and the national flag of Hawaii was saluted with 21 guns, the salute being returned gun for gun.

The funeral of his late Majesty Lunalilo the First, took place on the 28th of February. A battalion of 300 sailors and marines from the Benicia, Tuscarora, and Portsmouth, consisting of seven companies, under command of Lieut. Commander J. D. Graham, executive officer of the Benicia, were assigned a position in the line, and, with the exception of a detachment from Her Britannic Majesty's ship Tenedos, and one company of native cavalry, formed the only troops present.

After the deposition of the body in the royal mausoleum, the usual volleys were fired by the company of marines under command of Lieut. H. G. Ellsworth, United States Marine Corps, attached to the United States steamer Benicia. The battalion made an excellent appearance, and I was very much gratified at the uniform good conduct of the men.

The captains and officers of the three vessels also attended the funeral in a body.

His Majesty King Kalakaua, having, through his minister of foreign affairs, the Hon. W. L. Green, expressed his pleasure to receive the American officers, I, accompanied by the captains and officers of the several ships, received the honor of being presented to His Majesty, by his excellency (our minister resident) Hon. Henry A. Peirce.

An invitation was extended to His Majesty to visit the American men-of-war in the harbor, by the American minister. His Majesty was pleased to appoint Friday, the 6th day of March, when he will be received with the customary honors.

I have the honor to inclose a copy of a communication received from his excellency the minister of foreign affairs, which I shall publish at the first general muster of the ship's company.

I am, sir, very respectfully, your obedient servant,

WM. E. HOPKINS,
Captain U. S. Navy, Commanding.

Rear-Admiral A. M. PENNOCK, U. S. N.,
Commanding U. S. Naval Force on North Pacific Station.

DEPARTMENT OF FOREIGN AFFAIRS,
Honolulu, March 2, 1874.

SIR: The King has commanded me to thank you specially in his name for your attendance at the funeral of his late Majesty, along with your officers, sailors, and marines of the United States steamer Benicia under your command, and which added so much to the solemnity of the occasion.

With the assurance of the highest respect and distinguished consideration, I have the honor to be, sir, your most obedient servant,

W. L. GREEN.

Capt. WM. E. HOPKINS,
Commanding U. S. Steamer Benicia.

UNITED STATES STEAMER TUSCARORA, (3d rate,)
Honolulu, Hawaiian Islands, February 21, 1874.

SIR: The legislative assembly of this kingdom met in the court-house at this capital, at 12 o'clock noon, the 12th instant, in accordance with

the proclamation of the ministry issued immediately after the death of Lunalilo, the late King.

Three hours were occupied in the preliminaries of organization, when the assembly proceeded to choose by ballot a person to fill the vacant throne.

The result was the choice of Prince David Kalakaua by a majority of thirty-three (33) votes, thirty-nine (39) votes having been cast for him, and six (6) votes for the Queen Dowager Emma.

The grounds of the court-house had been thronged with people from an early hour, many of whom were the adherents of Queen Emma. These latter crowded to the front, and when the result of the balloting became known a fierce murmur of discontent arose among them, some shouting that "Emma was the people's choice; that they had been cheated and would not have Kalakaua for King."

The vice-president of the assembly, himself a partisan of Queen Emma, appeared on the balcony, and endeavored to quiet the people, but no heed was paid him, and when the committee appointed to notify Kalakaua of his election attempted to leave the grounds they were assaulted and forced to retreat into the building. One of them, who had reached his carriage, was torn from it, and barely escaped with his life.

The noise, excitement, and exasperation of the malcontents grew stronger every moment, until finally, some of the more daring spirits began to smash in the windows and doors, which had been closed. Then ensued a scene lamentable to behold. The rioters rushed into the building, and entering the offices of the attorney-general, judges, and marshal, smashed all the furniture and threw it into the street and grounds, together with the books, archives, and other valuable documents and papers.

This work accomplished, they poured up-stairs into the court-room and attacked the members who had voted for Kalakaua, with sticks, broken-chair legs, and anything they could lay their hands on.

Meanwhile, the police had torn off their badges, and mingled with the crowd outside, and, as the volunteer troops could not be trusted, no effort was made to call them out. The government was therefore powerless to act, but still hesitated to ask foreign aid.

Finally, when two or three of the members had been carried out senseless and several others badly hurt, Minister Bishop and the King elect asked, through our minister resident, Mr. Peirce, the intervention of our naval forces here.

Commander Skerrett and myself had accompanied Mr. Peirce, and been present throughout the whole of these proceedings, the more promptly to act should occasion require it.

In the morning I had stationed an officer on board the American bark Murray, lying alongside the wharf, to signal to the ships in case of trouble, and both ships, the Tuscarora and Portsmouth, were prepared to land the forces detailed at a moment's notice.

So soon, therefore, as the request was made, the signal was hoisted, and Commander Skerrett and myself went on board to superintend the debarkation personally.

In scarcely more than fifteen minutes companies comprising one hundred and fifty officers, blue-jackets and marines, including a Gatling gun from the Portsmouth were landed and marched to the scene of action.

As the battalion neared the court-house, the rioters ran out of the building from the rear, most of whom went up to Queen Emma's, while a few remained and mingled with the crowd who had taken no part in the disturbance.

The court-house was immediately occupied and sentries posted, at the request of the authorities, and, with the exception of some loud talk, no further demonstration was made.

About half an hour after our occupancy, a detachment of officers and men from Her Majesty's steamer Tenedos arrived on the grounds, and it was rather a significant circumstance that their approach was welcomed with cheers from the native populace, while the force from the Tuscarora and Portsmouth had been received in silence.

Soon after our intervention the authorities were urged to make arrests, but nothing of the kind was attempted for an hour or more, when the riot-act was read, and, at the solicitation of the governor, assistance was given the marshal in the arrest of three or four of the ringleaders, who had remained on the grounds. The crowd then quickly and quietly dispersed.

In the mean time the English force, at the instance of the government, marched up to Queen Emma's and dispersed the crowd which had collected in the grounds about her residence, and also assisted in arresting several persons who were pointed out as having been engaged in the riot.

At sunset order prevailed everywhere, and it was a subject for congratulation that, though some of the rioters were known to have been armed, no shots were fired during the day.

At the request of the government, made through Mr. Peirce, our force was distributed as follows for the night, viz: The company from this ship occupied the armory, under the command of Lieut. Commander Theo. F. Jewell, with a detachment of marines, under Ordnance Sergeant Theo. Hoff, stationed at the prison, while the officers and men from the Portsmouth remained at the court-house, under the command of Lieut. Commander Lewis Clark, with a guard of marines posted at the treasury.

With this disposition of the forces, orders were given Lieut. Commander Lewis Clark, the senior executive, to communicate by signal to the ships, should occasion for it arise during the night.

Commander Skerrett and myself were about in various parts of the town until 11 o'clock p. m., at which hour everything was quiet, and we came off to our respective ships.

About midnight three pistol-shots and a few stones were fired into the court-house grounds by some persons, who immediately took to their heels and ran away, and nothing more was heard of them. No other incident occurred during the night.

The company at the court-house cleared up the grounds and the interior of the building early the next morning, and the assembly met at 10 o'clock a. m.

The hall presented a sorry appearance, every article of furniture being smashed or badly damaged, except the clock and the pictures of the former kings, hanging on the walls, and the floor was spotted with blood.

The king-elect signified by letter his acceptance to the throne, and notified the assembly that he would be prepared to take the oath of office at Kinau Hale the chamberlain's residence, near the palace, at half-past eleven o'clock a. m.

The assembly then adjourned, and at the appointed hour the nobles, representatives, cabinet officers, diplomatic and consular corps, naval officers, and some few Hawaiian subjects and others, assembled in the grounds of Kinau Hale, and a few minutes before noon the king-elect advanced to the front of the veranda, and, after making a short address

to the nobles and representatives, took the oath and was proclaimed King.

His Majesty then received the cheers and congratulations of the assemblage, and this ship and Her Majesty's steamship Tenedos united with the battery on Punch-Bowl Hill in firing a national salute.

Some apprehension of disturbance was still felt, and the government asked the further protection of the forces of the United States and Great Britain until the public mind had become more assured.

At noon on the day following the King prorogued the assembly in person, on which occasion the battalion from the Tuscarora and Portsmouth and the company from Her Majesty's steamship Tenedos received him with presented arms at the door of the court-house, and this ship and the Tenedos again saluted the flag of Hawaii.

On the 16th instant, at the request of the government, the court-house was evacuated and one-half the force on shore withdrawn to their respective ships. Headquarters of our force remaining on shore were established at the armory, with Lieut. George A. Baldy in command.

A new cabinet went into office on the 18th instant, and the day following the minister of foreign affairs addressed our minister resident as follows, viz: "That such arrangements have now been made for the preservation of order in this city as will allow of the withdrawal at any time after daylight to-morrow morning of the forces which were landed from the United States ships Tuscarora and Portsmouth on the 12th instant, and which have rendered such invaluable services to His Majesty's government."

The minister resident seconded this request, and the entire force was promptly withdrawn in accordance therewith.

Commander Skerrett and myself acted together throughout this affair, and I trust our action will be acceptable to the Department.

Lieut. Commander Lewis Clark, the senior officer present with the battalion, and commanding the force from the Portsmouth, and Lieut. Commander Theo. F. Jewell, commanding the detachment from this ship, performed their duties in a very zealous, judicious, and creditable manner, in which they had the hearty support of Lieut. George A. Norris, Ensign M. D. Hyde, First Asst. Engineer J. H. Harmony, and Midshipman W. H. H. Southerland, of this ship, and Lieut. E. K. Moore, Ensigns J. W. Dauenhower, C. P. Rees, F. H. Crosby, L. P. Jouett, and Asst. Surg. T. H. Streets, of the Portsmouth.

Chief Engineer L. J. Allen and Asst. Surg. J. L. Neilson accompanied the battalion the first day, and during the continued occupation Lieuts. George A. Baldy and Webster Doty, and Midshipmen M. A. Shufeldt and T. E. D. W. Veeder, all from this ship, were on duty at the armory at various times.

The general conduct of the blue-jackets and marines was admirable, and warmly commended by the authorities and citizens of the town.

Special mention has been made to me by some of the authorities of the fine soldierly bearing of Ordnance Sergeant Theo. Hoff, of this ship, which fact I am glad to note in this dispatch.

Although it is not within my province to criticise the officers of other branches of the Government, I cannot refrain from expressing my admiration of the able, effective, and dignifed course pursued by our minister resident, Mr. Peirce, in the crisis just passed through.

In perfect accord with the government and his colleagues, zealous for the rights and interests of his countrymen, and thoroughly informed upon the affairs of the kingdom and the character of its people, his

great influence was constantly and effectively exerted, and his good offices seen and felt everywhere.

I respectfully append a dispatch from our minister resident, forwarding a copy of a resolution passed by the legislative assembly, thanking Mr. Peirce and his colleagues and the officers and crews of the men-of-war for their assistance in the restoration and maintenance of order in the kingdom; also, a resolution of thanks from the chamber of commerce and extracts from the press, which will perhaps inform the Department of some details and matters inadvertently omitted or not incorporated in this report.

Very respectfully, your obedient servant,

GEO. E. BELKNAP,
Commander, Commanding United States Steamship Tuscarora, and Senior Officer Present.

Hon. GEO. M. ROBESON,
Secretary of the Navy, Washington, D. C.

LEGATION OF THE UNITED STATES OF AMERICA,
Honolulu, February 16, 1874.

SIR: I herewith inclose a copy of a resolve, this day received, passed unanimously, on the 14th instant, by the legislative assembly, tendering its sincere thanks to the representatives of foreign powers, and to the officers and crews of the war-vessels in port, for their generous assistance in preserving the peace and order of the kingdom on the 12th day of February, 1874.

And it is with feelings of great pleasure and satisfaction that I seize this opportunity to present to you and to Commander Skerrett, commanding United States ship Portsmouth, my official and personal thanks for your cordial, judicious, and efficient support rendered in carrying out the views and requests of this legation during the late crisis through which this country has just passed, the details of which you have personal knowledge, and it is unnecessary to mention them.

I was eye-witness of the riot created by the friends of Queen Emma, the disappointed candidate for the Hawaiian throne, and of its instant suppression on the arrival of yourself, officers, and men upon the ground, and which occurred some time previous to the arrival of the armed force landed from the British corvette Tenedos.

Throughout the whole affair I beheld with pride and delight the admirable conduct of yourself and Commander Skerrett and the forces under your respective commands, and the judicious and humane course pursued for suppression of the riot without resorting to unnecessary violence toward individual offenders.

I shall report the facts to the Secretary of State, with the hope that the Secretary of the Navy, on learning them, will properly commend the services rendered.

You and Commander Skerrett were present when Mr. Ballin, French commissioner, and Mr. Henck, consul for the Empire of Prussia, as a committee appointed by the consular corps of Honolulu, tendered their thanks to me and yourselves for the armed intervention rendered by the United States vessels in port, for suppression of disorder and maintenance of peace and order on the late occasion.

With great respect, your obedient servant,

HENRY A. PEIRCE,
United States Minister Resident.

Commander GEO. E. BELKNAP,
Commanding United States Ship Tuscarora, and Senior United States Naval Officer present, off Honolulu.

RESOLUTION.

Resolved, That this assembly hereby tenders its sincere thanks to the representatives of foreign powers, and to the officers and crews of the war-vessels now in this port, for their generous assistance in preserving the peace and order of this kingdom on the 12th day of February, 1874.

LEGISLATIVE ASSEMBLY,
Honolulu, February 14, 1874.

I hereby certify that the foregoing resolution was unanimously adopted by the legislative assembly of the Hawaiian Islands, this 14th day of February, A. D. 1874.

R. H. STANLEY,
Secretary Legislative Assembly.

Vessels of war in port of Honolulu February 12, 1874: United States steamer Tuscarora, 3d rate, George E. Belknap, commander; United States steamer Portsmouth, 2d rate, sailing-vessel on surveying duty, J. S. Skerrett, commander; Her Britannic Majesty's sloop Tenedos, Commander Ray.

ROOMS OF THE CHAMBER OF COMMERCE,
Honolulu, February 19, 1874.

SIR: We, a committee of the chamber of commerce of this city, have the honor to present to your excellency, herewith inclosed, a copy, signed by all the members at present in Honolulu, of resolutions which express in a very moderate degree their sense of obligation to yourself and others therein referred to.

We have, at the same time, to request that you will be kind enough to communicate to Captains Belknap and Skerrett the tenor of this note and its inclosure.

We are, your excellency's most obedient servants,

CHAS. R. BISHOP,
GODFREY RHODES.
F. A. SCHAEFER.

His Excellency HENRY A. PEIRCE,
Minister Resident of the United States.

Resolved, That the Chamber of Commerce of Honolulu express to his excellency Henry A. Peirce, minister resident of the United States of America, and James Hay Wodehouse, esq., Her Britannic Majesty's commissioner and consul-general, its sense of obligation for the promptness with which they responded to the request of the authorities of the kingdom for aid from the ships of war of their respective countries, now in our port, to suppress the riot which broke out on the 12th instant, on the election of the now reigning sovereign by the legislative assembly; for the prudence and firmness they displayed in their endeavors to protect life and property, and for the singleness of purpose they exhibited in refraining from any interference in the politics of the country.

Resolved, That this chamber respectfully request his excellency the minister resident of the United States to convey to Captain Belknap, of the United States ship Tuscarora, and Captain Skerrett, of the United States ship Portsmouth, and Her Britannic Majesty's commissioner to express to Captain Ray, of Her Majesty's ship Tenedos, its thanks for the invaluable services rendered by the officers and men of those ships in the restoration of peace and order, and the re-establishment of the supremacy of the laws, all of which has been accomplished with perfect efficiency and in a most conciliatory mannner.

Charles R. Bishop,	Samuel G. Wilder,	P. C. Jones, jr.,
F. A. Shaefer,	Theodore C. Heuck.	Afong & Achuck,
A. T. Cleghorn,	Alexander J. Cartwright,	Edwin O. Hall,
A. W. Peirce,	S. N. Castle.	B. F. Dillingham,
J. C. Pfluger,	Godfrey Rhodes,	J. G. Dickson,
Jno. S. Walker,	Theodore H. Davies,	J. E. Banning,
J. T. Waterhouse,	M. Lomisson,	George C. McLean.
F. S. Pratt,	B. F. Bolles,	
Henry May,	H. M. Whitney,	

OPENING OF THE LEGISLATURE.

SPECIAL SESSION, FEBRUARY 12, 1874.

Fully two hours before the time set for opening the assembly, (12 o'clock noon,) the people began to assemble in the court-house grounds, and at a quarter to 12 there

were probably a thousand men, women, and children in the neighborhood. At that moment a procession of the Queen's adherents marched down the street, numbering perhaps 200 persons, with drums beating, who gave and took a considerable amount of cheering. The place reserved for spectators in the hall will probably hold 300 persons, and it was immediately filled to overflowing on the opening of the doors.

The desks of the nobles and representatives were arranged in a semicircle around the hall, and members generally were in their seats before the hour. On the right of the president's dais were seats reserved for foreign diplomatic and consular representatives, and among those present we noticed the American minister resident, the British commissioner and consul-general, the French consul, and consuls of other nationalities.

At 12 o'clock precisely Mr. R. H. Stanley called the assembly to order, and after prayer by the Hon. Mr. Lonoaea, his excellency P. Nahaolelua was called to the chair *pro tempore*.

The roll of nobles and representatives was then called, to which all responded except Hon. C. G. Hopkins (absent from the country.)

Hon. Mr. Kaukaha moved to go into nomination for permanent officers.

Before proceeding to an election of officers, Hon. Mr. Aholo raised the question, as to whether the representatives of 1872 or those of 1874 were the proper ones to elect a sovereign. He doubted also whether the members now returned would all be found, on examination, to be entitled to sit. He moved the reference of this question to the judges of the supreme court.

Hon. Mr. Wilder rose to a point of order. The house was not yet organized, and could not entertain any matters of business outside of choosing officers.

Supported by Hon. Mr. Kaukaha, who said he had long since settled this question in his own mind, he hoped there would be no attempt to obstruct the business of the nation like that put forth by the member for Lahaina. Mr. Kaukaha urged that the house must proceed to organize before discussing any questions. Hon. Mr. Kaai also ably supported this view. As yet this was only an assemblage of persons, and not the Legislative Assembly. But he thought that credentials of representatives should be first examined and reported on and members sworn, before any business whatever can be done.

The acting president ruled that the election of permanent officers was the only business now in order. The house then proceeded to ballot for officers, with the following result:

President, his excellency P. Nahaolelua; vice-president, Hon. S. K. Kaai; secretary, Mr. R. H. Stanley; interpreter, W. L. Wilcox; sergeant-at-arms, W. C. Parke; chaplain, J. N. Paikuli.

The election of messenger was postponed for the present.

The credentials of the representatives were then placed on the president's table, and referred to a select committee for examination, who, after returning into the house, reported that the credentials of all the representatives, as sent to the minister of the interior, were in due and legal form. Adopted.

On motion of Hon. Mr. Kupihea, Hon. A. S. Hartwell, associate justice of the supreme court, was requested to administer the constitutional oath of office.

Judge Hartwell then proceeded to administer the oath, first to the nobles and then to the representatives, the deputation from each island by itself. The officers were then sworn in.

His excellency C. R. Bishop, minister of foreign affairs, then read the following official statement to the house:

Mr. President, Nobles, and Representatives:

His late Majesty Lunalilo was elected as the successor to His late Majesty Kamehameha V, by the Legislative Assembly on the 8th day of January, A. D. one thousand eight hundred and seventy-three.

After a short reign of one year and twenty-five days, his earthly existence terminated at Haimoeipo, his private residence in Honolulu, in the island of Oahu, on the third day of February, A. D. one thousand eight hundred and seventy-four.

His late Majesty Lunalilo left no heirs, nor did he appoint any successor in the mode set forth in the constitution, with the consent of the nobles, or make proclamation thereof during his life.

There having been no such appointment or proclamation, the throne of Hawaii became again vacant, and the cabinet council immediately thereupon considered the provisions of the constitution in such case made and provided, and ordered that a meeting of the Legislative Assembly be holden at the court-house in Honolulu, on Thursday, which will be the twelfth day of February, A. D. 1874, at twelve o'clock at noon. And of this order all members of the Legislative Assembly will take notice and govern themselves accordingly.

There have been filed with your president a certificate of the decease of His late

Majesty, and a certified copy of the records of the cabinet council when the above order was made.

By virtue of this order you have been convened to elect by ballot some native alii of this kingdom as successor to the throne.

May the blessings of Heaven rest upon you, and may the God of all wisdom guide your deliberations.

CHARLES R. BISHOP,
Minister of Foreign Affairs.
EDWIN O. HALL,
Minister of the Interior.
ROBERT STIRLING,
Minister of Finance.
A. FRANCIS JUDD,
Attorney-Gen. of the Kingdom.

Hon. Mr. Kuikahi moved that the House do now proceed to ballot for a King of these islands. Carried.

Hon. Mr. Wilder on the part of the nobles and Hon. Mr. Moehonua were chosen as tellers.

The secretary then proceeded to call the roll of the house, beginning with the name of His Highness Chas. Kanaina. As each member's name was called he advanced to the ballot-box on the secretary's table and deposited his ballot.

The tellers, having counted the ballots, announced the result as follows:

Hon. D. Kalakaua	39 votes.
Queen Emma	6 "

His excellency the president then declared the Hon. David Kalakaua chosen as King of the Hawaiian Islands, in accordance with the provisions of the constitution.

The following members were appointed a committee to wait upon the King-elect and inform him of the result:

Hon. Messrs. Kaukaha, Moehonua, Aholo, J. H. Martin, Kaiue.

On motion, the secretary was instructed to prepare the necessary certificate of this election, and to cause a copy of the same to be published in the newspapers of the country.

Adjourned till to-morrow at 10 o'clock.

SECOND DAY, *February* 13, 1874.

The house was called to order by his excellency the president, at a few minutes past 10 a. m. There being no quorum present, the sergeant-at-arms was ordered to procure the attendance of absent members. The members having come in,

Prayer was offered by the Rev. Mr. Paikuli, chaplain of the house.

Minutes read and approved.

Mr. David Eldridge was elected messenger.

Mr. Kaukaha, from the special committee appointed to wait on the King-elect, reported the following communication from His Majesty the King:

IOLANI PALACE, *Honolulu, February* 12, 1874.

To His Excellency P. NAHAOLELUA,
President of the Legislative Assembly of the Hawaiian Islands:

SIR: I have received at the hands of your committee the certificate of my election to-day by the Legislative Assembly as successor to the throne of the Hawaiian Islands.

I wish to express to the Legislative Assembly, through you, my thanks for this highest mark of their confidence, and to say that I accept the royal trust.

KALAKAUA.

The message was received and ordered to be placed on the minutes.

His excellency the minister of foreign relations stated that His Majesty authorized him to say that he would be pleased to take the oath of office to-day, at half past eleven o'clock, at Kinau Hale. The members of the Legislative Assembly were invited to be present, and foreign representatives. His excellency regretted that the size of the building rendered it impossible to invite the public.

The house thereupon adjourned to to-morrow at 10 a. m.

THIRD DAY, *February* 14, 1874.

The house met at 10 a. m., his excellency P. Nahaolelua, the president, in the chair.

Prayer by the chaplain. Minutes read and approved.

Hon. Mr. Wilder, under a suspension of the rules, introduced a bill appropriating $10,000 to defray the expenses of the special session of 1874.

On motion of his excellency the attorney-general, the rules were again suspended, the bill passed through its several readings, and was finally passed, and a select committee, consisting of the Hon. Messrs. Wilder, Aholo, and J. H. Martin, appointed to lay the same before His Majesty.

His excellency the minister of the interior stated that His Majesty had communicated his intention to prorogue the assembly in person to-day at 12 o'clock noon.

On motion of the Hon. Mr. Kaukaha, a committee, consisting of his excellency J. O. Dominis, Hons. J. P. Parker and Kakina, was appointed to prepare and present resolutions of condolence to His Highness Charles Kanaina, father of the late King, on the death of His Majesty Lunalilo.

The following communication from the foreign residents of Honolulu was laid before the house:

To the President, Vice-president, Nobles, and Representatives of the Hawaiian Kingdom, in Legislative Council assembled:

We, the undersigned, citizens and foreign residents of this capital, beg most respectfully to present to your honorable body the expression of our most heartfelt sympathy and commiseration with you, and more especially with those of your number who suffered from the attack of a lawless mob on the day of the election of the sovereign to the Hawaiian throne.

We are universally anxious to tender you this expression of our extreme regret at the occurrence of so serious an outrage committed upon you while discharging the duties of the highest trust the people of this nation could confer, and we trust that your honorable body will be pleased to accept this as an assurance of our heartfelt sympathy with you.

Honolulu, 13th February, 1874.

E. A. Schaefer,
J. C. Glade,
J. C. Pflueger,
J. G. Dickson,
Jno. S. Smithies,
J. W. Robertson,
S. M. Damon,
C. S. Bartow,
John Ritson,
Theod. C. Heuck,
W. L. Green,
Samuel C. Damon,
S. F. Chillingworth,
W. G. Irwin,
M. Louisson,
H. Macfarlane,
W. A. Markham,
H. R. Stillman,
C. P. Ward,
Jno. H. Paty,
Chas. S. Heustice,
J. D. Brewer,
Wm. Johnson,
O. G. Clifford,
A. W. Peirce,
D. P. Peterson,
J. McColgan,
M. Green,
Thos. Cummins.
Geo. H. Luce,
Em. Fenard,
Wm. S. Luce,
A. P. Brickwood,
R. B. Davidson,
R. Meyer,
A. J. Cartwright,
Wm. W. Hall,
Frank Brown,
E. Krull,
H. M. Whitney,
W. Babcock,
Jas. L. Lewis,
Ira Richardson,
Chas. A. Castle,
E. P. Adams,
P. C. Jones, jr.,
N. Hymau,
John S. Walker,
H. I. Nolte,
E. Furstenau,
B. F. Bolles.
G. W. Houghtailing,
Theo. H. Davis,
G. W. Macfarlane,
Thos. R. Walker,
Godfrey Rhodes,
Fr. Banning,
Th. Opfergelt,
W. Martens,
J. D. Wicke,
H. Brautlecht,
Julius Hoting,
Jas. S. Lemon,
Geo. H. Ross,
W. R. Buchanan,
H. L. Sheldon,
J. H. Black,
Alex. Campbell,
H. Schmidt,
R. Riemenschneider.

On motion of Hon. Mr. Kaukaha, a select committee was appointed to prepare a reply expressive of the appreciation of the sympathy thus tendered by the residents of Honolulu, and that this correspondence be published in the newspapers of this city.

The following was the response sent by the chairman of the select committee:

LEGISLATIVE ASSEMBLY,
Honolulu, February 14, 1874.

GENTLEMEN: In behalf of the Legislative Assembly of the kingdom, we have the honor to acknowledge the receipt of the memorial presented on the 13th instant, by the citizens and foreign residents of Honolulu, tendering the expression of their sincere regret at the occurrence of so serious an outrage on the assembly, while in the discharge

of the high trust to them committed; and most candidly thank you one and all for your assurance of heartfelt sympathy so kindly expressed to us as a body, and more especially for the cordial manifestations of beneficence for those of our number who suffered upon that occasion.

Very respectfully submitted.

JNO. O. DOMINIS.
Chairman of Committee.

To Messrs. J. C. GLADE, F. A. SCHAEFER, A. J. CARTWRIGHT, and others.

The following resolution was then adopted, and ordered to be spread on the minutes:

Resolved, That this assembly hereby tenders its sincere thanks to the representatives of foreign powers and to the officers and crews of the war-vessels now in port, for their generous assistance in preserving the peace and order of this kingdom on the 12th day of February, 1874.

His excellency the attorney-general said, that as there was nothing occupying the attention of the house, he wished to avail himself of the opportunity to make some remarks in regard to the disgraceful riot of the 12th instant. Undoubtedly his colleagues and himself would be blamed for not having foreseen that deeds of violence would be committed, and for not having provided that an armed force be present to prevent their occurrence during the election of a King. This had been suggested and discussed. The cabinet thought that, as some of their number had resided here for twenty-five or thirty years, and one (the speaker) had been born here, they were acquainted with the Hawaiian race, and that they were safe in trusting the people. The behavior of the people during the interregnum preceding the election of his late Majesty, Lunalilo, and during other crises through which the people had passed, had led the cabinet to believe that though there would be great excitement and loud words on the occasion, yet that would be all. That it was better to trust in the law-abiding character which this people had acquired during long years, than to have the presence of an armed force during the election. A display of soldiery would be readily misconstrued to be either an attempt at coercion, or an appearance of fear, when none really existed. In this view, however, the cabinet were mistaken, as the murderous assaults on the honorable representatives and malicious destruction of property proved. A force of forty policemen had been provided, also a committee of one hundred and seven of our best Hawaiians had been enrolled who agreed to remain among the crowd and preserve order. This was deemed by all who knew of the arrangement to be amply sufficient. All present know of how little avail their efforts were.

Hon. Mr. Kaukaha regretted that his excellency the attorney-general had seen fit on behalf of the cabinet to make this explanation. After the experience of last year, when the populace had openly declared that if the legislature failed to elect the man of their choice, blood would be shed, and the experience of the "war at the barracks," the ministers ought to have been prepared and to have taken better precautions against a popular outbreak.

Hon. Mr. Kaukaha then offered the following:

Resolved, That the ministers are hereby authorized and directed to provide medical attendance from the foreign and native physicians of this city, and also nurses for the members of this house who have suffered injury; and to pay for the same out of the public treasury; and that the minister of finance render an account of such expenditure at the next session of the Legislative Assembly.

The house then adjourned to 10 minutes before 12 o'clock.

At 12 o'clock His Majesty, accompanied with his aids, left the palace, under a salute from Punchbowl battery, Her Britannic Majesty's ship Tenedos and the United States ship Tuscarora, and was escorted by the band and cavalry. On his arrival at the court-house the United States and British marines were drawn up in front of the building and received the King with the usual honors. He rode down in the state carriage, accompanied by his brother, Prince William Leleiohoku, and brother-in-law, Hon. A. S. Cleghorn.

When His Majesty entered the legislative hall the audience rose while he proceeded to the president's desk, and remained standing while he was present. Prayer was offered by the chaplain of the assembly, after which the King read the address, in Hawaiian and English, proroguing the assembly, printed in another column.

BY AUTHORITY.

To all to whom these presents shall come, greeting:

Know ye, that the Legislative Assembly of the Hawaiian Islands has on this twelfth day of February, A. D. 1874, elected His Royal Highness David Kalakaua, King of the Hawaiian Islands.

By order of the Legislative Assembly.

R. H. STANLEY,
Secretary of the Legislative Assembly.

HONOLULU, *February* 12, 1874.

PROCLAMATION.

We, Kalakaua, by the grace of God King of the Hawaiian Islands, agreeably to article twenty-second of the constitution of our kingdom, have this day appointed and do hereby proclaim and make known that falling an heir of our body, our beloved subject and brother, His Royal Highness Prince William Pitt Leleiohoku, is to be our successor on the throne as King after it shall have pleased God to call us hence.

Done at Iolani Palace in Honolulu, this fourteenth day of February, in the year of our Lord eighteen hundred and seventy-four.

By the King.

[L. S.] KALAKAUA R.

EDWIN O. HALL,
Minister of the Interior.

KALAKAUA R.

I, Kalakaua, King of the Hawaiian Islands.

To all to whom these presents may come, greeting:

By virtue of the authority of the 35th article of the constitution of the kingdom, do hereby ordain and decree that my brother, William Pitt Leleiohoku, is hereby invested with the style and title of His Royal Highness Prince Leleiohoku.

It is further my order and command that from and after the date of these presents, he shall take precedence of all other persons whatsoever, on all state occasions.

In testimony whereof we have caused these letters to be made patent and the seal of our kingdom to be hereunto affixed.

Given under our hands at Iolani Palace in the city of Honolulu, this fourteenth day of February, in the year of our Lord one thousand eight hundred and seventy-four.

By the King.

[GREAT SEAL.] KALAKAUA R.

CHAS. R. BISHOP,
Minister of Foreign Affairs.

It has pleased His Majesty the King to appoint as justices of the supreme court the following-named gentlemen:

Honorable Chas. Coffin Harris, first associate justice; vice A. S. Hartwell, resigned.
Honorable A. Francis Judd, second associate justice; vice H. A. Widemann, resigned.

JNO. O. DOMINIS,
His Majesty's Private Secretary.

IOLANI PALACE, *February* 17, 1874.

It has pleased His Majesty the King to appoint the following-named gentlemen as members of his cabinet:

His excellency Paul Nahaolelua, minister of finance.
William L. Green, minster of foreign affairs.
Honorable Hermann A. Widemann, minister of interior.
Honorable Alfred S. Hartwell, attorney-general.

JNO. O. DOMINIS,
His Majesty's Private Secretary.

IOLANI PALACE, *February* 17, 1874.

PROCLAMATION.

SATURDAY, *February* 14, 1874.

To all whom these presents shall come, greeting:

Know ye, that the Legislative Assembly of the Hawaiian Islands has, on the 12th day of February, A. D. 1874, elected His Royal Highness David Kalakaua, King of the Hawaiian Islands.

By order of the Legislative Assembly.

R. H. STANLEY,
Secretary of the Legislative Assembly.

HONOLULU, *February* 12, 1874.

At 12 o'clock noon, yesterday, February 13, His Majesty the King took the oath of office, at Kinau Hall, adjoining the palace, his honor Judge Hartwell, vice-chancellor of the kingdom, administering the oath as prescribed by the constitution. There were present the ministers of the late King, members of the privy council and of the Legislative Assembly, and foreign diplomatic and consular agents.

Before taking the oath of office His Majesty addressed a few words to those assembled, in which he was pleased to say that he had intended to have deferred this important act until some more convenient opportunity and at some appropriate public place, but that under existing circumstances he had decided not to defer it.

After the oath had been administered, the Rev. H. H. Parkèr, at His Majesty's request, offered an eloquent prayer.

Immediately on the conclusion of the ceremony, a royal salute was fired from the battery on Punchbowl, and responded to by the United States steamer Tuscarora and Her Britannic Majesty's steamer Tenedos.

A few minutes past twelve, his excellency John O. Dominis, governor of Oahu, accompanied by Maj. E. H. Boyd, of the late King's staff, and escorted by the Hawaiian cavalry, proceeded through the principal streets of the city, and made proclamation of His Majesty's accession in the following words:

"In the name of the constitution, I proclaim Kalakaua, King of Hawaiian Islands. It is the pleasure of His Majesty that his late Majesty's ministers of state discharge their several duties until further advised. It is the sincere desire of His Majesty that his people maintain peace. God save the King."

ACTION OF THE CONSULAR CORPS.

At a meeting of the consular corps, held on Saturday last, at the office of Mr. Schaefer, the following resolution was unanimously adopted upon the suggestion of one of the members:

"*Resolved*, That the senior of the consular body, Mr. Heuck, accompanied by Mons. Ballieu, who joins to his functions of commissioner those of consul for France, call upon the representatives of the United States and Great Britain, and convey to them the sincere thanks of the foreign consuls for the promptness and impartiality with which they, through their ships of war in port, assisted the local authorities in putting an end to the disturbance of last Thursday, without in any way interfering in Hawaiian politics. By so doing not only lives and property of American and British subjects together with Hawaiian were saved, but such protection was likewise given to the subjects of all other nations represented here by the members of the consular corps, and gratefully acknowledging this fact, the fairness and readiness of those who extended such protection is highly commendable. The gallant and moderate conduct of the captains, officers, and men of the Tuscarora, Tenedos, and Portsmouth was a pleasing fact, and the appreciating thanks of the meeting to Captains Belknap, Ray, and Skerrett, and those under their command, to be communicated to them through their respective representatives here."

The committee immediately called upon Mr. Peirce and Mr. Wodehouse and delivered the foregoing message, whereupon these gentlemen expressed their fullest appreciation of this act on the part of the consular corps, renewing the assurance that at all times the interests of the subjects of all nations together with those of this kingdom would be gladly and readily guarded by them.

RIOT OF THE QUEENITES.

The court-house in the hands of a mob; they demand a reversion of the vote of the Assembly, and that Emma be made Queen. Destruction of property and murderous attack on representatives. Intervention by an armed force from American and British ships of war.

When the announcement was made by the president of the Assembly on Thursday (at a few minutes before 3 p. m.) that Prince David Kalakaua was elected King of the Hawaiian Islands, several attempts were made in the audience to cheer, but they were promptly suppressed by the police. Some cheering was heard from the crowd outside, but it was mingled with yells and cries of rage from the mob of Queenites. Orators, mostly of the "sanscullotes" class, were busy here and there, exciting the passions of their hearers against the representatives, for having, as they declared, voted against the wishes of the people in making Kalakaua King.

Meantime the committee appointed to wait on the prince issued from the court-house and were about entering a carriage, when an attack was made upon them by

the mob. They were severely hustled, and their clothes torn, and were compelled to beat a hasty retreat, re-entering the court-house from the rear entrance. In the rush at this moment, a foreigner, named John Foley, who endeavored to rescue Major Moehonua (against whom the mob appeared to be particularly spiteful) was struck by some one in the crowd, whereupon he squared himself and struck right and left, but only for a moment. A blow with a stick from behind felled him to the ground and he was jumped upon and would have been killed in all probability, but that Major Wodehouse, the British commissioner, who happened to be near, forced his way through the crowd and stood over the man until he was carried away, badly but not seriously hurt.

The committee having got back inside the court-house, the mob now surged around to the front entrance, where with savage yells they demanded that the representatives appear. Whenever one of these was seen at an upper window, fists and sticks would be shaken at him, and the shout went up, "Look out for yourself!" while the eyes of the upturned faces glared with demoniacal fury. Repeated attempts were made by the marshal and deputy, and by well-known foreigners to persuade the mob to disperse peaceably, but these attempts only seemed to still further excite their unreasoning rage. They declared that they had nothing against any foreigner, but only wanted to get hold of the native representatives, to wreak on them their vengeance for having voted against Queen Emma. The situation of the members was now getting precarious, shut up unarmed in a building, the doors of which would yield to a moderate assault, with a howling mob without, apparently thirsting for their lives.

The cry was now raised by the mob, (about 4 o'clock;) "Break in the back doors"—the front being guarded by the police. (It is proper to state just here, that throughout the riot the native police were of little or no use.) One or two rushes, a piece of lumber used as a battering ram, and the folding-doors yielded and the mob poured in. The members were now mostly all in the upper portion of the building, with several of the ministers, judges, and other officials. For a time, after gaining an entrance, the mob devoted their attention to the destruction of property, and appeared to forget the representatives, while they proceeded to smash furniture, tear up papers and mutilate books, in the offices of the attorney-general, of Judge Hartwell, Judge Widemann, the police magistrate, and the police court room. Many valuable private and some public documents were ruthlessly destroyed, of a nature that can never be replaced. Fortunately the records of the supreme court, in the clerk's office up-stairs, were not reached by the vandals. All the windows and most of the window-sash of the court-house, both above and below, were broken with coral stones thrown by the mob or with clubs.

And now commenced the attack on the representatives, as they were endeavoring to escape from the building. Clubs, improvised from table and chair legs, were freely used, and that murder outright was not accomplished can only be explained by the number of the assailants all striking blindly at once. A few foreigners, too, were active and courageous in endeavoring to rescue and save the members. As it was, four were seriously injured by blows about the head, viz: Messrs. Kipi and Haupu, of Hilo; Nahinu, of South Kona; and Moehonua, of Honolulu. The following were badly, but not seriously, cut and bruised: Messrs. Lonoaea and Birch, of Wailuku; Kaiue and Kupihea, of Molokai; Kapule, of Makawao; Koakanu, of Koloa, Kauai; and Kakani, of Hana, Maui. We have heard of but one person outside the representatives who was attacked and beaten, J. Koii Unauua, a known strong partisan of Kalakaua. Hon. W. T. Martin and his son Hon. J. H. Martin, both members of the assembly, barely escaped from the mob, through the courageous assistance of foreign friends. A notable circumstance throughout the whole of the riot was that with the one exception at the beginning, no foreigner was molested, though if the rioters had not been dispersed by a show of an armed force just at the time when they were, indiscriminate violence, robbery, and arson would probably have resulted throughout the city.

Immediately after the attack on the committee, as described above, some of the members suggested that assistance be sent for from the ships of war in the harbor. But it was not until further violence had been perpetrated by the mob, and they had plainly declared their intention of having the lives of the members, that the authorities consented to seek for foreign assistance. A request from the King-elect, and from their excellencies the minister of foreign affairs and the governor of Oahu, was made to the representatives of Great Britain and the United States for the landing of a sufficient force for the protection of life and property. In a few minutes thereafter a squad of marines and sailors from the United States steamers Tuscarora and Portsmouth arrived, and shortly after their arrival a similar squad from Her Britannic Majesty's steamer Tenedos landed and marched up to the court-house and took possession of the building and grounds. Some of the rioters, who were actively engaged in the work of destruction in the building, no sooner caught sight of the armed force than they dropped their clubs and mingled with the crowd, which soon after gradually dispersed. A few were arrested on the spot, but the majority marched off in triumph, shouting and hurrahing for the Queen. To her residence they repaired in a crowd, and saluted her with exultant cheers, while some of her partisan leaders made incendiary speeches. In this connection it should be stated, that while the riot was at its height, a member

of the house of nobles drove to the Queen's residence, and begged of her to go down to the court-house, and use her personal influence in dispersing the mob and preventing the spilling of blood, which he represented as imminent. The Queen is stated to have treated this message with indifference, as no concern of hers. Subsequently she promised another gentleman that she would go, but did not go. She sent, however, a note to be read to the rioters, which was addressed to "my people," and was in substance to this effect: "That if they could not obtain their desires now, perhaps they had better wait until the morrow, when a new election for sovereign could be had."

The *debris* of the mob were in full blast at Her Majesty's residence, speech-making and boasting, after sundown, when a file of the Tenedos marines marched into the yard and dispersed them, the police making one or two arrests.

During Thursday night the foreign forces kept possession of the court-house and mounted guard at the palace, at the residence of the governor of Oahu, and at the barracks, prison, armory, and the government offices, while a detachment of the Honolulu Rifles was stationed at the powder-magazine. During the night three shots are reported to have been fired at the guard at the court-house, from behind fences in the neighborhood. These were supposed to have been from some of the rioters, who were prowling about in the darkness of the night. A man was seen skulking along by the corner of Wilder & Co.'s lumber-office, but on being challenged by the sentry, he disappeared. A few minutes later, the first shot was fired from the lumber-yard, followed by two others from different directions. There was, however, no further interruption to the quiet of the night, and Honolulu rested under the protection of the United States and Great Britain.

THE PRAYER FOR THE ROYAL FAMILY.

To the Editor of the Hawaiian Gazette:

SIR: Objection having been raised in certain quarters to the name of Queen Emma being placed before that of Queen Kapiolani in the prayer for the royal family in the cathedral of the Anglican Church, I trust you will allow me space to state that the order observed is that which would obtain under like circumstances in the court of Great Britain. Any one who will consult a prayer-book published in the early part of the reign of her present Majesty, will find that the queen dowager then took precedence of the consort of the sovereign, and the consort of the sovereign took precedence of the heir apparent.

I am yours, faithfully,

ALFRED WILLIS, D. D.,
Bishop of the Anglican Church in Hawaii.

IOLANI COLLEGE, *February* 16, 1874.

The Legislative Assembly will be prorogued at the court-house to-day at 12 o'clock noon, by royal commission.

The entire community of these islands have been laid under deep and lasting obligations to Captains Skerrett, Belknap, and Ray of the American and British war-vessels in port, and to their officers and men, for the prompt manner in which they rendered material aid in suppressing the riot, and the careful and considerate manner in which they discharged a peculiar duty.

THE INAUGURATION.

It had been the purpose of His Majesty, after his election, to have the inauguration ceremony performed, as has been the custom, in the Stone Church, and in the most public manner possible. But owing to the unexpected disturbances which took place on the election day, and the strong advice of his counselors that the oath of office should be taken as soon as possible, so as to remove all causes that prevented the restoration of quiet, he waived his wishes, and appointed 11¼ a. m. of Friday as the hour.

Kinau Hale, where the ceremony was performed, is near by the palace, and the most convenient place obtainable. At the above hour, the cabinet and other officers of the late King, the foreign diplomatic and consular representatives, the officers of the three war-ships in port, the nobles and representatives, together with native and foreign citizens to the number of two or three hundred, assembled there. A few minutes before 12 m. the King appeared on the veranda, and addressed the audience as follows:

"NOBLES AND REPRESENTATIVES: You have been called to assemble at this time with the representatives of foreign governments to witness my assuming the sacred trust of

the constitution. I am sorry that, on account of the present disturbance, I cannot, as I had designed, give my people a new constitution, as a blessing to them, and to establish the independence of our kingdom, and the throne of Hawaii nei; but this is a time of commotion, and my one great object is to strengthen the foundation of my power as guardian of the people. I am conscious that it is a high responsibility, and one that demands great caution in the possessor, but at this time, as the disturbance is not over, and as I see the consequences of the riot upon the representatives in my presence, I ask that you will aid me in assuming this sacred trust."

His honor Judge Hartwell, vice-chancellor of the kingdom, then administered in Hawaiian and English the following oath, His Majesty repeating it, sentence by sentence, after Justice Hartwell, and both resting their hands on the Holy Bible, held by His Royal Highness Prince Leleiohoku:

"I, Kalakaua, solemnly swear, in the presence of Almighty God, to maintain the constitution of the kingdom whole and inviolate, and to govern in conformity therewith."

Rev. H. H. Parker was then called on by His Majesty to invoke the Divine blessing, and offered a fervent prayer very appropriate to the occasion.

The audience then gave three cheers for their sovereign, which the crowd in the streets took up and repeated, while the guns on Punchbowl battery boomed forth the first royal salute to King Kalakaua and his royal standard, which was responded to by Her Britannic Majesty's ship Tenedos and United States ship Tuscarora in the harbor.

The diplomatic and consular representatives and other officers, as well as the people present, approached and congratulated His Majesty, after which the audience dispersed.

KING KALAKAUA.

Prince David Kalakaua, who was chosen on the 12th instant almost unanimously by the Legislative Assembly to be King, was born in this city on the 16th of November, 1836, and is therefore in his thirty-eighth year. He is the eldest son of the late C. Kapaukea and Keohokalole, who were connected with various branches of the high chiefs, descended from the ancient sovereigns. They left two sons, David and William, and two daughters, Hon. Mrs. Governor Dominis and Hon. Mrs. A. S. Cleghorn. The two eldest children, David and Lydia, received their education at the royal school, under the care of Mr. and Mrs. Cooke, and were there at the same time that the late sovereigns Kamehameha IV, Kamehameha V, and Lunalilo attended. Prince David and his brother and sisters enjoyed every advantage which the best schools in this city could afford for obtaining a good education; and how well they improved these advantages those who know them best can attest. They are all as conversant with the English as with their own tongue.

During the past few years Prince David has held a position as clerk to the Interior Department, and has also been secretary of the privy council under both of the last Kings. He has, therefore, had an opportunity to observe and become familiar with the workings of government, as he has with all connected with it. Whatever may have been his former political sentiments, as expressed in legislative debates, the events of the last two years, and particularly of the past few weeks, will serve to show him, as it must every one else, the necessity of adopting a liberal and conservative yet firm policy, which will tend to unite as much as possible all conflicting interests in the kingdom. Never before has a ruler in Hawaii needed so greatly the aid of prudent and wise counselors in his administration, possessing the respect and confidence of the whole people, with the loyal support of his native and foreign subjects. On the sagacity of his choice much of the success of his reign will depend, in inspiring confidence at home and abroad, and in removing whatever causes may tend to create weakness in the administration of the government, or want of harmony among the various classes composing our small population. A misstep now may launch our frail ship of state on a sea of turmoil, while prudence and caution just at this time may secure the independence of Hawaii for many years to come.

King Kalakaua was married some years since to Kapiolani, widow of B. Namakeha, who was brother of Naea, the father of Queen Emma. She is also niece of 'Keliikahonui, one of the chiefs of Kauai, and was named after Kapiolani, the famous chiefess of Hawaii who broke the Pele Kapu as described by Bingham, p. 255, and who was one of the earliest converts to Christianity. The lady who has thus become elevated to the position of Queen is not only connected with high rank, but is in private life a most estimable woman, who has been, for several years, an unostentatious and exemplary member of St. Andrew's church of this city. In his marriage relations, the example of our new sovereign will commend itself to all who deplore the growing tendency of Hawaiians to set them aside, and will doubtless have a good effect on the people of his kingdom.

CLOSING OF THE LEGISLATIVE ASSEMBLY.

His Majesty the King having signified his purpose to close the session of the Legislative Assembly at noon on Saturday, that body assembled at their hall a few minutes before the hour named, which was filled to its utmost capacity with spectators. It was a sad spectacle to witness the representatives seated around the half-furnished hall, with heads bandaged and arms resting in slings—a sight that has never before been seen here since the establishment of a constitutional government.

A few minutes before twelve, a salute from Punchbowl announced the departure of the King from the palace. He was accompanied by his staff and the governor with his staff, and the Hawaiian cavalry and rifle companies, and rode to the hall, in his state coach, with his brother, Prince Leleiohoku and the Hon. A. S. Cleghorn. In front of the court-house the marines of Her Britannic Majesty's ship Tenedos and the United States ships Tuscarora and Portsmouth were drawn up, and saluted His Majesty as he passed them.

At quarter past 12 he entered the legislative hall and ascended to the speaker's desk, his brother standing by his side, with several kahilis ranged on either side of the rostrum. Prayer was offered by the chaplain, Rev. Mr. Paikuh, after which His Majesty read, first in Hawaiian and then in English, the following address:

'*Nobles and Representatives:*

"The vacancy of the throne of our kingdom by the demise, on the 3d instant, of our much-lamented predecessor, made it necessary for you to meet in extraordinary session.

"There has been no unnecessary delay either in your coming together or in the discharge of the important duty imposed upon you by the constitution.

"By your free choice I am now King, and I hope, with your aid and that of all my faithful subjects, to make my reign a blessing to my people.

"The present session having been called for a special purpose, which has been accomplished, I have no other business to lay before you now; but the regular biennial session will be convened in April next, as required by the constitution, at which time all matters pertaining to the welfare of our kingdom may be considered.

"Nobles and representatives: I desire again to thank you for your partiality and kindness toward myself; and I pray the Almighty that He will continue to protect and prosper our kingdom.

"I now declare this legislative assembly prorogued."

At the close of the speech His Majesty retired to the chief justice's room, where he received the foreign representatives, and after a few minutes' delay returned to the palace, in his carriage, escorted as he came, and frequently cheered by the populace as he passed through the streets. To those who are familiar with our state occasions there was nothing new, though to strangers it was all novelty. Every one remarked that His Majesty appeared well and delivered his address in Hawaiian and English with perfect presence of mind, although it was his first public appearance, and under very trying circumstances.

UNITED STATES SHIP TUSCARORA, (third rate,)
HONOLULU, HAWAIIAN ISLANDS,
February 23, 1874.

SIR: I respectfully forward to the Department, to accompany my report of the 21st instant, a copy of a letter from the minister of foreign affairs, written by command of His Majesty the King, in acknowledgment of the services rendered the government of Hawaii by this ship and the Portsmouth, in the recent political trouble at this capital.

Very respectfully, your obedient servant,

GEORGE E. BELKNAP,
Commander, Commanding United States Ship Tuscarora, and Senior Officer Present.

Hon. GEO. M. ROBESON,
Secretary of the Navy, Washington.

DEPARTMENT OF FOREIGN AFFAIRS,
Honolulu, February 21, 1874.

SIR: I am commanded by His Majesty the King to thank you in his name, and in that of His Majesty's government, and through you, Commander Belknap and Commander Skerrett, of the United States ships Tuscarora and Portsmouth, for the prompt and efficient aid rendered to the local authorities in suppressing the riot in this city on the 12th instant.

The events of the 12th instant, unfortunate as they may have been, served to exhibit the feelings of friendship which exist between the two countries, and the certainty with which this government may rely in cases of emergency upon cordial and disinterested co-operation of the representatives and ships of the United States, as well as those of Her Britannic Majesty.

I have the honor to be, with great respect and high consideration, your excellency's most obedient, humble servant,

W. L. GREEN.

His Excellency HENRY A. PEIRCE,
Minister Resident of the United States.

MERITORIOUS CONDUCT.

No. 12.] UNITED STATES FLAG-SHIP LANCASTER,
Rio de Janeiro, September 10, 1874.

SIR: It gives me pleasure to bring to the notice of the Department the bravery and presence of mind exhibited by Ensign G. A. Merriam, United States Navy; Thomas Kelly, coxswain; Henry Edgeworth, ordinary seaman; Frank Burns, ordinary seaman; and Dennis Lucy, landsman, all of the Monongahela, in their praiseworthy though unsuccessful efforts to save the life and their rescue of the body of Peter Greavy, ordinary seaman, who fell overboard from the foretop-gallant yard of that vessel on the morning of the 28th ultimo.

Such conduct cannot be too highly commended, and I trust it will receive due recognition from the Department.

Very respectfully, your obedient servant,

WM. E. LE ROY,
Rear-Admiral Commanding U. S. Naval Forces on South Atlantic Station.

Hon. GEORGE M. ROBESON,
Secretary of the Navy, Washington, D. C.

NAVY DEPARTMENT, *November* 3, 1874.

SIR: The Department has received your No. 12, of the 10th of September last, respecting the gallant conduct of Ensign G. A. Merriam, Thomas Kelly, coxswain; Henry Edgeworth, ordinary seaman; Frank Burns, ordinary seaman; and Dennis Lucy, landsman, all of the Monongahela, on the 28th of August last, in the harbor of Rio de Janeiro, in leaping overboard to rescue Peter Greavy, ordinary seaman of that vessel, who fell from the foretop-gallant yard into the harbor, during exercises aloft, and sustained such injuries as to cause his death. While regretting the loss of a worthy seaman in the execution of the duties assigned him, the Department hears with satisfaction of the commendable and humane efforts of his comrades to save him, in which they would have been successful had not the injuries received caused his death. None the less credit is due them for restoring the lifeless body

to the deck of the Monongahela. You will please cause this letter to be read at muster on board the vessels of your command, and furnish a copy of it to each of the persons whose conduct is thus appreciated and commended.

Respectfully,

WM. REYNOLDS,
Acting Secretary of the Navy.

Rear-Admiral WM. E. LE ROY,
Commanding Naval Forces, South Atlantic Station,
Rio, Brazil.

No. 14.

REPORT OF ADMIRAL D. D. PORTER.

WASHINGTON, D. C., *November* 7, 1874.

SIR: I have the honor to inclose herewith my annual report, containing suggestions in regard to such professional matters as have come under my observation.

Very respectfully, your obedient servant,

DAVID D. PORTER,
Admiral.

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WASHINGTON, D. C., *November* 6, 1874.

SIR: In conformity with the regulations and special instructions, I submit herewith my report in regard to naval matters.

The most interesting event to our Navy during the past year was the assembling of the several squadrons in the West Indies, where fleet-evolutions were conducted under the command of Rear-Admiral Case.

Perhaps nothing could have occurred more instructive to officers and men, or better calculated to improve the discipline and efficiency of the service; and if this assembling of vessels could take place oftener, it would be greatly to the advantage of the Navy.

On such occasions a spirit of emulation is awakened among the crews of the different ships, and strangers who witnessed the late evolutions were much impressed with the rapid manner in which raw crews were disciplined and manœuvred both on shore and afloat.

This may in a great measure be ascribed to the system taught at the Naval Academy, which, if it does not produce practical seamen with the facility of the old method, certainly gives an education that will in the long run make better officers.

I took great pains to keep fully informed of everything that related to the West India fleet, and while well impressed with its *personnel*, I regret to say that the fleet showed itself very unsuitable for war purposes, either to contend against the improved class of vessels now being constructed by all foreign powers, or to cut up an enemy's commerce.

In the first place, nearly all our ships were of wood, unprovided with improved ordnance, and only one or two having a speed of ten knots. Now, even the heaviest war-vessels built in Europe far surpass this speed when fitted for sea.

I need scarcely say that officers of the Navy, who expect to take part in any conflict that may arise between our country and a foreign power, look with anxiety for an improvement in our ships, more particularly since the West India drill made it apparent to the youngest of them that our combined force of vessels was incapable of a successful encounter with a fleet one-fourth as large built on modern principles.

Indeed, one such ship as the British iron-clad Invincible ought to go through a fleet like ours and put the vessels *hors de combat* in a short time, for she could either run them down or destroy them at long range with her heavy rifled guns.

We have no ordnance that would make any impression on such a ship at a distance of over six hundred yards, and no vessel of equal speed in our Navy would be placed under her fire by a prudent commander.

I state facts that are known not only to our own, but to foreign officers who are visiting among us, and who in the performance of their duties transmit such information to their governments. I do not, therefore, consider that I am betraying our weakness, which is already too well known to every nation but ourselves.

Our people are under the impression that we have formidable ships and are incurring large expenditures to maintain a navy, while in fact we have none of the former, and our expenditures are small when compared with those of other nations who have less extensive coasts and fewer interests at stake, for we are the second commercial country in the world, with principles to defend and rights to maintain which are certainly of more importance than a few millions of dollars.

The disbursement of money for building and equipping vessels of war, instead of being a tax on the people, is really an encouragement to the working-classes, enabling them to live while contributing by their skilled labor toward the defense of their country.

When Captain Ericsson built the first monitor the days of wooden and semi-armored fighting-ships were numbered; the great three-deckers of Europe were laid up in ordinary, and if foreign nations have since that time constructed wooden war-vessels, they have been fast cruisers, mounting heavy rifled guns, to police the seas and cut up commerce.

After the battle between the Monitor and the Merrimac it was evident to experienced naval officers that the monitor system would supersede all others then existing, and foreign nations as well as ourselves went to work to improve upon Ericsson's ideas. The result has been that European nations have built up large iron-clad navies, but we have done nothing of importance since the close of our civil war.

When that struggle terminated we had a respectable force of monitors, some of them capable of contending with any vessels afloat, and for a short time we were really in a condition to defend our coasts against a foreign foe. We had also a system of ordnance superior to any other then existing.

These vessels, however, built in a hurry, of timber not thoroughly seasoned, have become unseaworthy, and their guns, though still formidable at close quarters, cannot compete with the heavy rifled ordnance now used abroad.

I may therefore say that our Navy, as compared with others, is like a foot-soldier armed with a pistol encountering a mounted man clad in armor and carrying a breech-loading rifle. It would be easy to imagine how little chance the man on foot would have should a conflict occur.

Yet the day will come when the men who must lead the Navy into battle will find themselves placed in a position that will require all their

professional resources, for they will not be provided with proper means to meet the iron-clad ships of other powers.

We have now but 66 monitors fit for service out of the forty-eight which appear on the Navy Register; twenty were long ago condemned as unfit for service.

The available monitors formed part of our West India fleet which lately assembled; but they would have been of little use in a fleet-fight on account of their want of speed.

Their turrets and hulls cannot resist the heavy rifled projectiles now in use, and they cannot raise their turrets from their seats in a sea-way, for the water would rush in and deluge their holds.

These monitors were built during the late war for a specific purpose, which they amply fulfilled, viz, to operate in smooth water against fortifications, and for the defense of harbors. For such service they proved themselves admirably adapted, and their turrets and hulls, well marked with heavy shot, which did no harm, showed them practically invulnerable *at that time.* Possessing the heaviest ordnance then known, they were a match for any single ships afloat; but since they were built 10 and 11 inch plates have been easily perforated by the 11-inch rifle.

The Whitworth muzzle-loading 9-inch gun, with a charge of fifty pounds of powder, has fired a shell weighing upward of four hundred pounds through a shield composed of three 5-inch plates of iron, interlaminated with two 5-inch layers of iron concrete, the whole forming a mass of 25 inches thickness, while the 14-inch iron plate has been bored through and through by the 12-inch Krupp gun, with a steel shell, at a distance of 1,089 yards.

Either of the above-mentioned guns could perforate the turrets of any of our monitors, while the vessels from which they were fired could remain at a distance where our smooth-bore guns could do them no harm.

If such guns could so easily demolish the turrets of our monitors, what chance would the latter have against a ship like the Inflexible, now building in England?

She is of 11,095 tons displacement, 8,000 indicated horse-power, is to be driven at a speed of fourteen knots by twin-screws, and it is understood she is to mount four 81-ton guns, throwing shot of 1,600 pounds weight.

It is very evident that such a ship, with her 24-inch plates of iron, would receive no damage from one of our monitors, except at very close quarters, a contingency which, with her speed, the Inflexible could always avoid.

I mention this vessel as she is of the latest type, with all the most recent improvements; but to my certain knowledge there are upward of one hundred other iron-clads superior to anything we now possess in speed, guns, and armor.

I draw this comparison to show how illy adapted our monitors are to act in concert with a fleet against any vessels carrying heavy rifled ordnance.

When it was proposed to repair the monitors, I examined them to ascertain if they would bear additional iron on their hulls and turrets, with the following result:

Four inches of additional plating around the turrets of the Passaic class would weigh 51 tons, and cost about $22,000, and would bring the vessel down in the water about 4 inches, making the turret 15 inches thick. Eight inches around the turret would weigh about

210,000 pounds, cost about $44,000, and bring the vessel down 8 inches, making 19 inches of plating.

The plating on the hull of a monitor of which the armor is 6 feet (Passaic class) weighs, for a course of 6 feet deep, and 6 inches plating all around the hull, 360 tons, (of 2,000 pounds,) which would bring the vessel down about 24 inches more in the water, making, with turrets and side-armor, 28 inches. This would bring the monitors' decks pretty close to the water, and render it impossible to send them outside a harbor.

But even this weight could not be placed on the monitors; they were not originally built to bear it. Their hulls are too light, and they could illy carry any extra weight beyond what they have at present, except, perhaps, on their turrets.

To increase the thickness of the turrets it is necessary to put on laminated plates, for we have no machinery in this country capable of rolling heavier than 5 or 6 inch plates, and they would not stand 12-inch rifled shot.

Thus you will see that the monitors, with their present batteries, speed, and armor, are in no respect a match for the new style of iron clads with their powerful rifled guns; and it was apparent to myself and to every officer of the West India fleet who had studied the subject that the monitors would have been of little avail if brought in collision with the foreign vessels in Cuban waters.

These are matters that can be thoroughly appreciated only by professional men; and although there is not an officer in our Navy who would hesitate to command such vessels as we have, in time of war, yet naval men feel that they will be compelled to sacrifice life and reputation if ever they go into action with monitors outside a harbor.

To the younger officers, who have not experienced the inconveniences of war, and look upon it merely as a pleasant episode, it matters little in what sort of vessel they go to sea. They accept any situation, and delude themselves with the hope that, no matter what the odds against them, victory will perch upon the banners of the United States Navy. But there will be a rude awakening to the actual condition of affairs if we do not follow the example of foreign nations and place our Navy in a proper state for service.

There is not a navy in the world that is not in advance of us as regards ships and guns, and I, in common with the older officers of the service, feel an anxiety on the subject which can only be appreciated by those who have to command fleets and take them into battle.

If called upon at this time to command the naval forces of the United States, in case of hostilities, a position which it is my ambition and my right to fill, I should be put to my wit's end to succeed with such an incongruous set of vessels as we now possess. Prudence would probably recommend that they be shut up in port and no fleet operations attempted with them—sending the wooden vessels abroad singly to do all the damage possible until captured by the enemy; our 50-gun frigates perhaps succumbing to a 2-gun clipper armed with 10-inch rifles, and our smaller cruisers driven off by merchant-vessels carrying rifle-guns of lesser caliber.

This is no exaggeration. It is simply what will occur when we go to war, and it would be much better to have no navy at all than one like the present, half-armed and with only half-speed, unless we inform the world that our establishment is only intended for times of peace, and to protect the missionaries against South Sea savages and eastern fanatics.

So different was the speed of the various vessels in the West Indies,

during exercises in fleet formations, that considerable difficulty was encountered in getting them in anything like order; and, as far as gaining experience in fleet-sailing was concerned, the object could have been better attained by employing the same number of steam-launches.

I do not mean to say that the officers derived no benefit from the fleet-exercises, since they soon became aware of the inefficiency of their vessels for war purposes, and the first step toward improvement is for a nation to understand its weakness.

Of all the wooden vessels built during the rebellion, but three available ones are left, constructed of unseasoned timber, the best that could be procured at the time. All the others are decayed and laid up, encumbering our yards, or broken to pieces, or sold out of service.

Of the forty-eight so-called iron-clads now on the Navy Register, thirty-one can never be of the least use in peace or war, unless sunk as obstructions to channels.

Out of the ninety-nine wooden vessels on the list, only thirty-nine come properly under the head of "vessels of war," that is, vessels propelled by steam and sails, and carrying efficient guns; and of all these not one could contend with a foreign ship of equal size. So, in fact, we have only thirty-nine wooden ships of war and six monitors, but one of which, the Dictator, has good speed, and she is sadly out of repair.

There were two classes of vessels commenced between 1862 and 1865, the Connecticut and the Congress class, which, had they been built of seasoned timber, would have proved themselves efficient with proper batteries. These ships have been severely criticised, but nevertheless have proved good vessels, and had they a little more beam would be remarkably fine ones. They were constructed at a time when we were threatened with foreign interference in our domestic affairs, and answered the purpose of preventing it. They were afterward improved by adding another deck, which enabled them to berth their crews comfortably.

This type of vessel is now being built by the British, with more beam and greater steam-power.

But with three exceptions, all our vessels of this class have passed away, those on the stocks being too much decayed ever to be launched.

It will be readily imagined what a terrible scourge vessels like those just mentioned would be to an enemy's commerce in time of war, and it is likely that similar vessels with improved machinery and additional beam will again be introduced into the Navy, for it is certain they were the only ones in the service that proved themselves fast and good seaboats at the same time.

For all that, such ships are only fit to cruise against an enemy's commerce; as for want of resisting power they could never form part of a line of battle in a fleet-fight.

One or two of these vessels took part in the exercises at Key West, but I do not see that they were better adapted for that kind of business than the rest.

You have no doubt a general knowledge of the condition of all the ships in the Navy, but it is not to be expected, in the multiplicity of your duties, that you could be as familiar with the subject as a professional man; I will therefore recapitulate what appears to me to be the state of the several vessels at the present time. Perhaps a clear statement of their condition may induce Congress to do something toward renovating the naval service.

Our largest vessels, the Colorado, Franklin, Wabash, and Minnesota, each mounting about 40 guns and costing in the aggregate nearly four

millions of dollars, were built nineteen years ago. With the exception of the Franklin, they have only auxiliary engines, and their average speed does not exceed seven knots, the Franklin alone making nine knots.

They have been frequently repaired and will not stand much more pulling to pieces. It would be cheaper to take their machinery out and use them for receiving-ships, building a smaller class of vessel to supply their place.

It is not necessary for the commander-in-chief of a squadron to have one of these large vessels for a flag-ship. He could perform his duties better in a smaller vessel with much less expense to the Government.

For instance, a ship of the Tennessee class can be maintained at one-third less expense than the Franklin, and, with the addition of an improved battery, would be a much more formidable vessel.

The Connecticut, Antietam, California, Delaware, Java, New York, Iowa, Niagara, Pennsylvania, and Susquehanna have all gone to decay, only the Tennessee and Florida being in condition for service. Of the Lancaster class, the Lancaster, now on the coast of Brazil, is so much out of repair that it would be unsafe to send her home, except in summer. She could hardly weather a winter-gale. This ship is a slow sailer, and can only be repaired at great expense. Her last repairs were made with unseasoned timber, which has shrunk away from the live-oak.

The Brooklyn, Pensacola, Hartford, and Richmond are slow, old-fashioned ships, and should be rebuilt on new models and provided with improved machinery and guns, a portion of the latter rifles.

The Severn is worn out, and the Congress and Worcester after their present cruise is up cannot be repaired to advantage, but must be entirely *renewed*. The Powhatan is a good side-wheel vessel with fair speed, and, though not a perfectly efficient cruiser, is still a useful ship-of-war. The Saranac is an old side-wheel vessel, rather slow, and would stand no chance in battle with a ship of the modern type of half her size.

The Alaska, Benicia, Omaha, and Plymouth are fine vessels of their class and approach perfection nearer than any other of our vessels, yet they cannot work their batteries with effect, either because they have not sufficient beam for the guns, or the guns are too long for the beam.

The Lackawanna, Ticonderoga, Canandaigua, Monongahela, and Shenandoah are a handy class of vessel, but are without speed. They have been much improved by alterations during the last four years, but no one would now think of building ships on their models.

The Juniata, Ossipee, Iroquois, Kearsarge, Wachusett, Mohican, Tuscarora, and Wyoming are all fair vessels, but need improved machinery and guns. Of the Nantucket, Narragansett, Ashuelot, and Monocacy, the two former are worn out, and the two latter are only fit for surveying duty in Chinese waters.

The Swatara has proved herself a good vessel, and has considerable speed. When the Quinnebaug, Galena, Vandalia, Marion, and the eight new vessels are finished, it is to be hoped they will do as well.

The Kansas class of vessels—six in number—should be rebuilt on new principles, with improved batteries and machinery.

The Frolic, Gettysburg, Tallapoosa, Wasp, Palos, and Dispatch, are nothing but dispatch-vessels; the last-named would, in time of war, be the only efficient one.

The seventeen sailing-vessels are, with one exception, laid up in ordinary, where they will probably remain until wanted for store and receiving ships, and the four store-ships are mostly worn out.

As you are well aware, of our iron-clad monitors, the Ajax, Canonicus, Dictator, Mahopac, Manhattan, and Saugus are in good condition as far as they can be made available, and are laid up temporarily in Pensacola; and the Catskill, Jason, Lehigh, Montauk, Nahant, Nantucket, Passaic, and Wyandotte are undergoing repairs to place them in the same condition, which will occupy about ten months.

These vessels might have been made stronger and more impervious to heavy rifled shot, by putting an additional 5 inches of solid plating on their turrets and hulls, but in that case it would have been impossible to send them outside a harbor, and the expense would have been so great that it would have been better to construct new vessels.

A hull to carry so much iron must be very solidly constructed with double bottom and sides, which would add so much to the weight of the above-mentioned vessels that they would be liable to sink in smooth water.

Their construction was originally planned by very clever men, and they were never intended for heavy weights, any more than a sloop of the Congress class would suit to carry 11-inch guns in broadside.

Now they can be moved from one port to another, going long distances, though with some risk to the vessels and their crews; but no vessel of the small monitor class, with nothing to prevent the sea breaking completely over her, can be considered a satisfactory sea-going ship. Depending, as the monitors do, upon the junction between the turret and the deck being perfectly water-tight, when the turret is raised to permit it to revolve, this water-tightness no longer exists. Consequently, in a sea-way these vessels cannot revolve their turrets and fight their guns.

Besides this, a small monitor of the Passaic class while being deluged in rough weather would have her ventilation affected so as to destroy the health of her officers and men, a most important matter when the necessity of keeping a ship's company in good health is considered. Hence, I am of opinion that the class of vessels above mentioned should be kept entirely for harbor defense.

Of the double-turreted monitors, the Monadnock, Miantonomoh, Amphitrite, Roanoke, and Terror, (really valuable vessels,) want thorough repair, and entire new hulls of iron and new engines. They could not now go with safety from port to port, although intended for sea-going vessels, and capable, when in order, of making long voyages. Some of these vessels are now under repair, and, as they may be converted into fine iron-clads, I would recommend that they be altered as follows:

I propose that their hulls should be built on the bracket-plate arrangement, like the British armor-plated vessels, and like the torpedo-boat Alarm, the latter the first vessel built on this plan in the United States.

This would give these monitors a double bottom and double frames throughout, and would enable them to carry nearly twice the thickness of iron on hull and turrets, or, at least, enough to make them invulnerable against the nine, twelve, and eighteen ton guns generally in use in foreign navies.

If solid oak backing is used the resisting power would be still greater.

These vessels should have engines of great power and simplicity of design, of the compound type, which would enable them to cross the ocean or cruise on our coast in the heaviest weather.

Both the Monadnock and the Miantonomoh have given evidence of their ability to make long sea-voyages with comfort to officers and men, and this kind of vessel would no doubt live in a gale where an ordinary frigate would founder. In the reconstruction of these vessels I would

recommend a change in the manner of revolving the turrets, either having them move on balls or rollers, or have high coamings fitted with India-rubber packing to reach to the sill of the gun-port, for the present system is liable to the objection of water getting in in a sea-way. The turrets have also unreliable machinery to raise them, to say nothing of the danger of being completely disabled, while revolving on their pivot, by heavy shot.

Great diversity of opinion has existed in the minds of experienced men with regard to the best form of fighting-ship, and after examining over a hundred different plans of foreign iron-clads, I think I am justified in the conclusion that vessels like the Monadnock and Miantonomoh are better adapted for protecting our coasts and harbors, and for fighting, than any others yet built.

I have seen the Monadnock in all weathers, and riding out heavy gales at anchor on our coast, yet she rode the sea like a duck.

This class of vessel has a fore and aft as well as a broadside fire, and no ship can be considered an efficient fighter unless so constructed.

To make these monitors more enduring against shot, their plating should be solid on the sides and turrets, or each thickness of plate should be at least 5½ inches, the heaviest we are able to roll in this country. The laminated plates placed upon our vessels during the rebellion were of 1 inch thickness, and adopted from necessity, we having, in the early period of the war, no rolling-machines that could turn out heavy plates.

Besides, at that time, the laminated plates were sufficient to resist the enemy's projectiles; but the solid plate has the advantage, inasmuch as so great a weight of iron is not needed when it is used, since experiments prove that a properly-rolled 4-inch plate has greater resisting power than 6 inches of laminated plates.

The double-turreted monitors, when reconstructed, could be made to carry 20-inch turrets of 5-inch plates, or thicker if they could be obtained. This would bring them down about 9 inches more in the water, and additional draught would also be caused by the side-plating, which could be remedied, however, by raising the sides, giving the vessels more free-board, and allowing height for larger boilers.

No ship is a complete fighting-vessel unless she is able to ram her antagonist, and it will be found in the event of war between two great powers that the fleet possessing the best rams, other things being equal, will win the battle.

In ramming, the crushing process is superior to the piercing, and I would recommend that the bows of our iron-clads be made very strong and especially adapted to this purpose.

The present system of naval tactics will serve very well to keep a fleet in order and to concentrate the vessels previous to an action, but when the battle commences and the ships are enveloped in smoke there is an end to order and signaling by flags, and every captain must act on orders previously given or on his own responsibility. It is evident that rams and torpedo-vessels will have matters pretty much their own way then, and the more smoke there is the better it will be for them.

It would be impossible for an enemy to avoid rams and torpedo-vessels in a dense smoke, unless continually maneuvering for the purpose, thereby breaking up the order of battle.

The decks of our monitors have hitherto been insufficiently protected. Their deck-armor should be increased to 3 inches of steel, covered with wood, for being of rather low free-board these vessels are liable to damage from plunging shot.

There are a variety of matters to be taken into consideration in the

reconstruction of the monitors, for it would be only a waste of money to rebuild them altogether on the old plan, with the prospect of their turning out inferior vessels, when so many new improvements can be introduced from plans perfected by foreign powers.

The chief improvements should be invulnerability and speed, without which latter requisite a ship of war is of little use, except to assist in the defense of fortifications against the attacks of a fleet.

Harbors cannot be protected by forts alone, for experience has shown that even wooden ships with ordinary smooth-bore guns can pass the heaviest batteries in comparative safety.

History records among others the following places defended by heavy works that were obliged to succumb to ships, viz: Copenhagen to Nelson, St. Jean d'Acre to the French, passage of the Dardanelles to Sir John Duckworth, Algiers to Lord Exmouth, San Juan de Ulloa to the French and to the Americans, Moro Castle to the English.

Among the numerous instances I might cite our own successes of recent date in the south to show that monitors are as necessary in the defense of harbors as are the land fortifications.

For instance, suppose a fleet of twenty iron-clads were to attack the forts at the "Narrows," in the bay of New York, and that one of them should get by, what harm could the forts do the vessel after it had once steamed past Castle Garden, where it could with impunity lay the city under contribution and burn at leisure all the shipping?

No enemy would be likely to attempt such a task, however, with a fleet of well-built monitors inside the harbor to follow them up.

Forts are undoubtedly most necessary means of defense, but there are none in existence that a modern iron-clad fleet could not pass, unless aided by monitors, torpedoes, and obstructions. Ships have a great advantage over forts, for they can retire from an engagement when worsted and return with re-enforcements. Ships that can bring ten guns of the heaviest caliber against one must eventually succeed.

All monitors, and, indeed, every vessel of war, should be fitted with a double screw, for the power of turning rapidly will give a ship so fitted great advantage over one with a single screw, a matter fully appreciated by naval men.

I have adverted to the turning of the turrets in monitors. The advocates of the spindle system will, no doubt, raise objections to any other, but one great fault of this plan is, that in a sea-way a ship would be filled with water if the turret was raised. A heavy shot, too, that might not penetrate the turret, might, perhaps, unseat it and render it unserviceable.

When steam is down the present method of turning renders it impossible to use the turret, as there is no means of working it.

I have been struck with the objections to the method in use for revolving monitor-turrets, when so simple a contrivance might be adopted, as is demonstrated at Harlem Bridge, where 150 tons are revolved by a hydraulic jack in the hands of one man with comparative ease.

There may be objections to the introduction of this plan into monitors, of which I am not aware, but as a practical and simple method it seems to me preferable to any other.

In organizing the system on which a navy has to be built, it is necessary to take into consideration: first, the needs of a country for the protection of its commerce; second, the extent of coast to be defended and the exposed condition of the sea-board cities; third, the relations of the country with the other powers of the world and the advancement continually made in the science of maritime war; fourth, it is necessary to

look deficiencies in the face, and, at whatever cost, place the Navy in condition to meet any emergency.

This is not the condition of our own Navy at present. When that is fully considered, it would be the height of folly to call it "efficient," for while that delusion lasts no supplies will be given by Congress, and we will grow more and more inferior every year to other powers.

War is at all times a dreadful alternative; still more so when forced upon a nation so utterly unprepared as we are at present.

I speak strongly on the subject because I know the real condition of the Navy and its present inability to meet the wants of the nation, and I may yet live to see my country humiliated, from the fact that no attention has been paid to the recommendations of those whose duty it will be to lead our ships into action or direct their movements in time of war.

Now is as good a time as any to inaugurate a comprehensive system of naval *defense*, which would be the proper term to apply to the operations of a non-aggressive nation that does not require a navy with which to wage aggressive war, but simply to protect its coasts, cities, and commerce.

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We can only maintain our position among nations by following in their wake in naval matters; if we do not, as we once did, set them the example in the quality of our ships and guns.

We have never had a settled policy with regard to the class of vessels we should build, and I here beg leave to suggest a system which, if adhered to, will soon place us in a very respectable condition, enable us to defend our coasts, and do great damage to our enemies.

Owing to the introduction of the torpedo as a means of warfare, it is not likely that any nation will attempt to invade the coasts and harbors of an enemy as they once did, when protected by these devices, in addition to forts, monitors, and rams, nor can the ports of a belligerent be thoroughly blockaded if proper rams and torpedo-vessels are built in sufficient numbers to operate outside. It is impossible to protect a harbor by forts and sunken torpedo-mines alone, for our experience during the rebellion satisfied us that torpedoes, unless protected by powerful vessels and forts combined, would be almost useless.

There is no difficulty in taking torpedoes up, no matter how carefully planted, if not under the guns of a moving fleet.

What would prevent boats at night from cutting the wires of any torpedo-nest in the channel leading into New York, if the boats were supported by a powerful fleet waiting to move up to the attack?

Even without groping for the hidden wires, the sunken torpedoes could be shattered by others devised for such purposes, and the mines sprung or destroyed by concussion, leaving the way open.

No better plans for defending channels leading to cities could have been devised than those used by the confederates during our war. Their ports and rivers were full of infernal machines, and yet, except at Charleston, no fleet was ever stopped by their torpedoes or their batteries, which were of the strongest kind. Even at the place I have mentioned, it was found, after the evacuation, that nearly all the sunken mines had been rendered harmless by salt-water or interior condensation. Upon one occasion the Ironsides anchored directly over one of these mines, containing a ton of powder, and remained there twenty-four hours, while the enemy were endeavoring in vain to explode it by electricity.

To be sure, gun-cotton, as at present arranged, does away with the

difficulties experienced in those days in exploding submarine mines, but there is no difficulty in breaking torpedo wires, even under the walls of a fort, if not protected by heavy ships and guns afloat.

Even suppose our channels obstructed, and that an enemy does not care to try a passage, the blockade of a harbor is just as humiliating and damaging. Mines planted in channels will not prevent an enemy from shutting up New York at both ends, if he is superior to us in iron-clads; and it is, therefore, imperatively necessary that we should at once provide for building annually so many tons of monitors, say five thousand tons for the present, until we have thirty first-class monster rams of great speed, armed with monster guns, in addition to our present force, and at least fifty iron torpedo-boats of good speed, and not less than one hundred tons each.

The latter should be hauled up under cover, fitted with all the modern improvements, and kept for an occasion, while hundreds of others could be improvised after the commencement of a war.

This is partly the system pursued by Great Britain. She builds annually twenty thousand tons of naval vessels, and finds it the cheapest way of averting war and protecting and increasing her commerce, which has doubled since 1865, while ours has dwindled away to exactly one-half.

Too much confidence is felt by our Army torpedo-officers in the effects of their sunken devices on passing ships.

No doubt if a torpedo should explode under a vessel it would instantly destroy her; but out of the many planted on the bottom few have been found effective in time of need, especially after having lain for a considerable period; and then, unless the torpedoes are to be fired upon impact or by circuit-closers, they could do no harm to a passing fleet, in a dark night, with lights obscured, at a distance of one hundred yards; and what chance would there be of exploding a torpedo-nest at the right time? Even supposing a few ships were destroyed, that would not prevent the others from going ahead.

All this tends to show that it is not explosions on the bottom upon which we must rely, but on torpedo-vessels and floating projectiles below the surface of the water.

Recent experiments in England develop facts which were partly known to me before, but these trials were conducted on a scale of liberality by the British government which has put at rest any doubts on the subject, and a commander has the satisfaction of knowing that he can run within forty feet of a mine of gun cotton, weighing five hundred pounds, without danger to hull or machinery.

A short time since, a committee of naval officers made some interesting experiments with submerged torpedo-mines on the ship Oberon, of 649 tons, late packet steam-vessel. The first explosion was with 500 pounds of the Waltham Abbey disk gun-cotton, confined in a service mine-case.

This was fired at a horizontal distance of 100 feet from the nearest side of the Oberon, the mine being at a vertical depth of 36 feet below the vessel's keel, and diagonally 110 feet.

The explosion proved entirely harmless, as did also a second and a third attack at 80 and 60 feet distance.

At the last experiment the mine was sunk only 50 feet outside the outer line of the ship, when all present expected that the vessel would be blown to pieces.

Great pains had been taken to insure her against sinking after the explosion, but the precautions were all unnecessary.

"The mine was fired from Fort Monkton by electricity; then followed the usual upheaval of water, to the height of more than a hundred feet." "As the disturbance struck under the vessel's starboard side, she rose to the motion of the thrown-up waves to the height of several feet, and fell again into the outer swell, surging up on the crater's edge."

The Oberon remained apparently unharmed, and it was only after she had been placed in dock that the damage could be seen. It was considerable, but not sufficient to make her leak; and had she been one of a fleet passing a fort, she would have only had her engines disabled, and could still have been towed onward to her destination.

Had the Oberon been thirty feet nearer the mine she would probably have gone down, but this experiment shows that ships must either be in contact with torpedoes or nearly over them to receive any material damage; and in shallow water the direction of least resistance being over the torpedo instead of toward the vessel's bottom, the chances are that a ship with little draught would pass unscathed a torpedo only twenty feet distant.

I have myself seen a side-wheel steamer's paddle-box blown off, the buckets broken, and a number of bulkheads thrown down by a torpedo exploding under the wheel, while the hull remained uninjured, and I fired a hundred-pound torpedo on the Mississippi in ten feet of water, only fifteen feet from the bow of a coal-barge, without the latter receiving the least damage, while twenty pounds in contact with the hull would have blown the barge to atoms. These experiments show that ships have a chance to escape destruction from sunken mines. Where there are a number of vessels, some of them must get by, as one explosion will probably cause the chain of mines to be broken up.

By experiments lately made in Sweden, it was shown that a mine of dynamite one hundred and six feet from two other disconnected mines exploded them both by concussion; from a similar shock the electric wires would be broken.

There are chances, then, which should not exist, for a fleet to pass a fort, and they can only be neutralized by torpedo-vessels, monitors, rams, sunken mines, obstructions, and forts combined.

To build a great number of fighting-ships on any but the monitor plan seems inadvisable, as we require mostly iron vessels for the defense of our coasts.

It is beyond our power to wage war on the coast of any European nation that is provided with proper appliances for defense. Our policy should be protection to our coasts and aggressive war on an enemy's commerce.

If we should fit out powerful iron-clad fleets, and they should engage an equal force of the enemy, the destruction of either or both forces would have no effect to bring about a peace; neither country would suffer materially.

It is only by destroying the commerce of a great nation that we could bring her to terms; hence, one vessel like the Alabama roaming the ocean, sinking and destroying, would do more to bring about peace than a dozen unwieldy iron-clads cruising in search of an enemy of like character.

For this reason, I would recommend that we should no longer repair the old wooden ships, but entirely rebuild them with new hulls and improved machinery and guns, and we should build up a fleet of swift wooden cruisers, of at least twelve hundred tons, with the heaviest batteries and a speed of not less than fourteen knots.

If we were to lay up our present vessels, and build a new set, with

improved machinery, it would be economy in the end; the vessels would be run on half the present amount of coal, would require fewer men, and would do their work twice as well.

Great Britain, following the example we set her during the rebellion, is building a number of such vessels, but is improving on our models, machinery, and guns of that period.

I lately read an account of the trial-trip of two of these vessels just built—the Raleigh, 22 guns, iron-screw frigate, 3,215 tons, with sheathed bottom, and 800-horse power, and the Sapphire, 14 guns, screw-sloop, 1,890 tons, and 350-horse power. The former on her trial-trip made 15.3 knots, and the latter, it is supposed, will do still better.

There are now building in England the following fast-clipper steamers, that could entirely destroy the commerce of an enemy, with no chance of being overtaken, viz: The Bacchante, 14; Diadem, 16; Diamond, 14; Egeria, 4; Swan, 26; Sappho, 4. Besides these, there are one hundred and nineteen other sloops and frigates, wooden and of the composite kind, which, if not of equal speed, are very fast vessels, and of the most destructive character.

This is the policy of a great commercial nation, our only superior in commerce, and every year she adds twenty thousand tons to her navy, never by any accident getting behindhand. Who can interfere with British commerce, or maltreat a British subject in any part of the world, without paying damages?

Great Britain has a coast-line twenty times less in extent than our own, and the combined navies of Europe could not approach it with safety, while with us, as matters now stand, a single iron-clad frigate could blockade our shores from Maine to Texas.

Different opinions prevail with regard to the best plan of constructing iron-clad cruisers that can safely go around the world without racking themselves to pieces.

It is necessary that we should have a few of these, say six, to convoy and protect bodies of troops in case we desire to land on an enemy's coast.

Experience teaches us that wood and iron combined do not agree, and ships built on that principle soon decay.

Heavy iron-clads, with high freeboard, are exceedingly uncomfortable, and rack themselves to pieces in a sea-way, and, in the race between heavy ordnance and iron-sides, the guns have gained so great ascendancy, that it is doubtful whether wisdom would dictate building a ship with heavy plating more than three feet above the water. There is a limit to the quantity of iron which a ship can carry, while there seems to be, comparatively, no limit to the size of guns, and the 38-ton cannon now contracted for at Krupp's foundery will perforate any iron-clad ever built.

History repeats itself in the course of centuries. Men fought in armor until musket-balls made it useless, and the same principle is beginning to apply in the matter of iron-clad ships of war, especially as regards turrets and topsides.

I believe that iron sea-going ships of war will ultimately be built without any armor on the topsides; that the hull, for three feet above and below water, and the decks will be made as far as possible impervious to shot, but that all the upper works will be ordinary iron through which the shot will be allowed to pass.

This, it is true, will not afford perfect protection to the ship's company in action, as shot passing through the thin iron will knock down everything in its course; but this is better than having a turret of tif

teen inches thickness crushed in upon a crew, and I believe men will fight longer and better on an open deck where they can see their enemy and know what is going on.

It is very demoralizing to be shut up in a turret and have men killed by concussion, with the likelihood of a stray shell coming into the port and killing all hands. A few years ago officers and men would scorn such shelter, and I believe at this day that almost any one would rather take his chances on the open deck.

Uncovered guns run little risk of damage by shot at sea. When a vessel is rolling, not more than one shot in twenty takes effect; and there are no serious objections to guns on the open deck, provided they are covered from grape and canister. Bulwarks could be thickened to extend a little over the height of the gun, but only in front of it.

I propose that the hulls of sea-going ships should be built as strong as the monitor hull, and light bulwarks and upper works made of iron, with light iron spar-deck covered with wood planking.

A vessel the length of the Monadnock could carry eight heavy guns amidships, that could, in action, be run out in broadside. Such a ship might have all her upper works cut away and still be fit for battle. A vessel of this kind should be built without head-booms, and her forward and after gun should be so arranged as to run out to give her a fore and aft fire. Add to this a double screw, and you will have a good sea-going fighting ship.

A vessel of six hundred or more tons displacement than the Monadnock would carry twice as many guns as she does now, and having light upper works, would be a good sea-boat and lively in any kind of weather. The guns could be fitted to lower below the deck when loading, like the English gunboats.

A vessel of this kind should be built on the bracket system, with double bottom and top frames strongly connected with the hull.

Such a ship with the same steam-power would have greater speed than one of the heavy European iron-clads, for she would have much less weight to carry. All her upper works being of light iron, with wooden sheathing to her bottom, she would cost much less and would last for years.

To enable such vessels to carry a heavy gun right on their bows, they should be constructed with projections forward under water, like the English ships Northumberland, Hercules, Bellerophon, Invincible, &c., and the torpedo-vessel Alarm, just built at New York.

The latter has now mounted right on her bow a fifteen-inch gun, and could sustain one of twenty inches, gaining sufficient displacement and buoyancy forward by reason of this projection, which, on the ships I propose, would answer the purpose of a ram.

I have given a general outline of what these sea-going iron-clads should be, and think that the generality of intelligent officers will coincide in my opinions.

These cruisers could keep the sea under sail, as well as wooden ships, and I believe their guns would be fired with greater rapidity and precision than would be possible from a turret.

Turreted cruising-ships can only be built with high freeboard, which renders it necessary to cover their sides with heavy plating all the way up. There must be a limit to this plating, which can never be made thick enough to resist the largest guns. Six or eight heavy steel shot striking at the water-line would drive in their sides and probably cause them to sink, or withdraw from action to repair damages, if such a thing was possible.

GUNS.

We have three classes of guns in our Navy which had no superiors *of their kind* in any country, viz, the fifteen-inch, the eleven-inch, and the nine-inch.

These are, in fact, peculiar to the United States Navy, and at the commencement of our civil war they were the best guns afloat. Since that time, owing to the immense improvements in plating iron-clads, it has been found necessary to construct heavy rifled ordnance for the purpose of perforating the iron.

Against wooden ships our cast-iron guns are sufficiently effective at the ordinary ranges where a ship can be struck at sea; but there should be a proportion in ships' batteries of heavy rifled cannon, which we have not on hand, and of which at present there seems no likelihood of our obtaining a supply.

Many attempts have been made to convert our cast-iron guns into rifles, and the Parrott rifled gun cast during the late war was expected to accomplish great results. The Parrott gun, however, proved a failure, and on several occasions caused more destruction, by bursting, to the crews of our own vessels than they did to the enemy.

Late experiments with the fifteen-inch gun prove that it will not stand the test of rifling. Whatever may be the cause of this failure, or whatever the prospect of remedying the evil, confidence in rifled cast-iron guns has been destroyed, and it would not do to introduce them into the Navy until more satisfactory results are obtained.

It is my present opinion that cast-iron guns are not fit for rifling, and that all cast-iron rifled guns are liable to burst at the fiftieth fire.

We have trifled for years over an important matter that might have been decided in a few months, and all that is now left us to do is to go to work, and either procure from abroad the requisite number of large rifled guns, or else establish a Government foundery where we can construct them to our own satisfaction.

By reason of this proposed change in our ships' batteries, it is not desired to dispense with fifteen, eleven, and nine inch smooth-bores, but to have a proportion of rifled guns of heavy caliber mixed with them, so that our vessels will not be forced to go into action with only smooth-bores against long-range guns which the former cannot reach.

To establish our own foundery would require a considerable outlay, but there is no other way of producing heavy rifled guns in the United States; for private individuals would not undertake to build guns for the Government, unless they were paid for the plant as well as the guns, and it is altogether likely that we should have better ordnance built by Government than by contract.

What we require for immediate service is: 1st. A class of steel breech-loading guns, superior to the seven-hundred-pounder thirty-five-ton rifled gun. These are needed for the monitors, which should each have one smooth-bore and one rifled gun. 2d. Guns superior to the four-hundred-pounder eighteen-ton gun, for our sea-going iron-clads and for pivot-guns in our wooden vessels. 3d. Two-hundred-and-fifty-pounder twelve-ton guns for our smaller vessels, as pivot-guns, which would be equivalent to nine, ten, and twelve inch rifles.

"Taking the penetrating powers of the shot from these guns, on leaving the muzzle, into consideration, I find that the twenty-five-ton gun is about three and a half, the eighteen-ton gun more than three, the nine-ton gun nearly twice, and the six-and-a-half-ton gun one and a half

times as powerful as our heaviest sixty-eight-pounder, while at long ranges, say one thousand yards, it is greater still."

The twenty-five-ton gun rises to more than seven and a half times, the eighteen-ton gun to seven times, &c.

This comparison is made merely to give a general idea of the advantage rifled guns will possess in any future contest at sea.

Similar comparisons hold good with regard to other rifled guns. The total energy of the heaviest rifled cannon increases even more rapidly than the penetrating power per inch of circumference.

This maintenance at long ranges of the penetrating power of rifled projectiles is well understood and appreciated by every nation except ourselves; but if we combine the system of guns in use abroad with our own smooth-bore cannon, we shall have batteries on board our ships with which no fault could be found.

In reading over some reports of experiments "on the penetration of armor-plates by steel shot," I find it asserted that the American fifteen-inch gun, charged with fifty pounds of powder and throwing a spherical steel shot of four hundred and eighty-four pounds, would fail to penetrate the Lord Warden's side (7½ inches iron and 30 inches teak) at any range, while the nine-inch twelve-ton gun, with a forty-three-pound charge, would send its two-hundred-and-fifty-pound shot through her at a range of one thousand yards. It is also stated that the fifteen-inch gun would not penetrate the Warrior (4½ inches iron and 18 inches teak backing) beyond a distance of five hundred yards, while the English seven-inch six-and-a-half-ton gun, weighing about one-third as much as the fifteen-inch gun, would do the same with a charge of twenty-two pounds of powder and one-hundred-and-fifteen-pound shot, and the twelve-ton gun would penetrate up to two thousand yards.

These facts are well understood by naval officers.

It was previous to the year 1869 that the Lord Warden and the Warrior were cited as above by way of comparison; but since that time great advances have been made in guns and armor, and in Captain Simpson's late report we find a thirty-five-ton twelve-inch, wrought-iron, muzzle-loading rifle-gun firing a shot of seven hundred pounds, with one hundred and ten pounds powder, perforating a fourteen-inch plate backed by eighteen inches of timber and one and a quarter inches iron skin, at five hundred yards; passing through twelve inches of solid iron, eighteen inches backing, and one and one-half inches iron skin up to seventeen hundred yards; up to two thousand yards, passing through eleven inches of iron, twelve of wood, one and a quarter inches iron skin, &c.; at thirty-one hundred yards, passing through ten inches iron, eighteen inches backing, and one and a quarter inches iron skin.

The twenty-five-ton eleven-inch muzzle-loading wrought-iron gun, with a shot of five hundred and thirty pounds and eighty-five pounds powder, perforates fourteen inches iron, eighteen inches backing, and one and a quarter inches iron skin up to five hundred yards; goes through twelve inches iron, eighteen inches backing, and one and a half inches iron skin, at six hundred yards; goes through eleven inches iron, twelve inches backing, and one and a quarter inches iron skin, at thirteen hundred yards; and through ten inches iron, eighteen inches backing, and one and a quarter inches iron skin, at nineteen hundred yards.

The ten-inch wrought-iron muzzle-loading gun of eighteen tons, with four-hundred-pound shot and seventy pounds powder, perforates within a fraction of fourteen inches iron, backed by eighteen inches teak and one and a quarter inches iron skin, at five hundred yards; goes through twelve inches iron, eighteen inches backing, and one and one-half inches iron skin at the same distance; perforates eleven inches iron, twelve

inches teak, and one and a quarter inches iron skin, at six hundred yards.

The nine-inch wrought-iron muzzle-loading gun of twelve tons, with fifty pounds powder and two-hundred-and-fifty-pound shot, perforates eleven inches iron, twelve inches wood backing, and one and a quarter inches iron skin, at six hundred yards, with seventy pounds powder and four-hundred-pound shot; goes though ten inches iron, eighteen inches backing, and one and a quarter inches iron skin, at one thousand yards.

The eight-inch wrought-iron muzzle-loading gun of nine tons, with thirty-five pounds powder and one-hundred-and-eighty-pound shot, goes through seven inches iron, twelve inches backing, and one and a half inches iron skin, at four hundred yards.

Thus it appears that any of the above guns, with the exception of the last mentioned, could destroy one of our eleven-inch turrets outside of nine hundred yards.

There are three guns now proposed to be constructed by Mr. Krupp, one of fourteen inches diameter of bore and fifty-seven and a half tons weight, one of fifteen and seven-tenths inches diameter of bore and eighty-two tons weight, and one of eighteen inches diameter and one hundred and twenty-four tons weight. What such guns will do against iron turrets, as at present constructed, it is easy to foresee.

So rapid is the march of improvement in ordnance, that every year finds us more helpless, and under the circumstances it would be as unjust to expect our Navy to succeed against such odds as it would to count on victory for our Army provided with smooth-bore artillery and old-fashioned muskets, against rifled field-pieces and Remington breech-loaders.

The American people are very exacting, and apt to show a good deal of feeling against those who sustain defeat, as I frequently noticed during the late civil war, without fully informing themselves of the disadvantages under which their combatants were laboring. The popular chagrin would be great, indeed, if we hadour ships driven from the ocean in a war, and our ports hermetically sealed by a blockading force.

Under such circumstances our Navy would have great cause of complaint at being sent on a forlorn hope with guns and vessels built in or before 1860, to compete with guns and vessels built since 1870.

The Navy would not be to blame in such a case if it met with defeat, but it could very properly complain of not being supplied with means to gain victories and protect our coast and harbors.

To show the importance foreign powers attach to rifled cannon, I annex a list of guns now on hand in the British navy alone. I select these as belonging to the most prominent naval-power, all the others being armed in a similar manner.

BRITISH NAVY.

Return showing number of serviceable rifled guns December 31, 1873.

13-inch		2
12-inch—		
38 tons	4	
35 tons	13	
25 tons	15	
		32
11-inch		42
10-inch		270
9-inch		565
8-inch		133
7-inch—		
7 tons	139	
6½ tons	536	
90 cwt	16	
		691
Breech-screw	881	
Breech-screw	76	
Total number serviceable rifled guns		[illegible]
Number of guns supplied for iron-clad ships:		
12-inch—		
35 tons		[illegible]
25 tons		[illegible]
10-inch		[illegible]
9-inch		17
8-inch		[illegible]
7-inch		86
Under manufacture for iron-clad ships:		
12-inch, 38 tons		[illegible]
11-inch		5

TORPEDOES.

Since my last report I find that the subject of torpedo-warfare is attracting the greatest attention all over Europe, and much attention is paid to the sea-torpedo, or torpedo-vessels for accompanying a fleet or attacking outside a harbor.

The Germans are building twenty-eight sea-torpedo vessels, each one hundred and fifty feet in length between perpendiculars, which have been commenced since we undertook the construction of two. Experiments are also going on with the "fish-torpedo," which has been greatly improved during the past year, and is now being adopted by most European governments.

We have paid no attention to this device, and in so doing I think we have made a mistake, as the "fish-torpedo" seems to possess much merit, and would, no doubt, if properly managed, produce disastrous results to an enemy in a fleet-fight. One or two accidents created a want of confidence for a time in the "fish-torpedo," but these mishaps arose from mechanical difficulties which can be easily removed.

It is well for us to avail ourselves of all the improvements in warfare that are devised, for under different circumstances all may prove effective. The "fish," towing, Ericsson's, and Lay's torpedoes, all have good points, and their inventors should be encouraged.

All these devices could be combined in a torpedo-vessel carrying outriggers, and an opportunity might occur where each could be operated with advantage.

A torpedo-vessel should be ready to use the different inventions as circumstances might require, and should never be confined to one particular method. The fish-torpedo, and those of Ericsson and Lay, will require to be projected from a torpedo-vessel, or from land close to passing ships.

The Lay torpedo has been tested and approved. This invention, being charged with acids, would be more available if operated from shore in combination with batteries, especially if attacking a ship some distance off. It could also be used from a monitor-built vessel whose decks are close to the water.

The device is ingenious, and could, no doubt, be much improved, if Government would give the necessary encouragement.

I have examined the Ericsson torpedo, and think well of it, although I only know of the success of the experiments through officers who witnessed them.

This torpedo is simple and easily operated by means of compressed air and a steam air-pump, without danger to those engaged in working it. At close quarters it could be used with great effect, from any vessel, say at a distance of 100 feet, which is about as far as any torpedo could be advantageously employed from a ship at sea.

For a first experiment I think the Ericsson torpedo a great success. Whatever difficulties exist are merely mechanical and easily remedied, and the inventor should receive every encouragement from the Government, for these machines are too expensive for a private individual to construct unless he has assurances that the Government will liberally reward his ingenuity.

Both the Ericsson and Lay torpedoes are very valuable additions to the present means of torpedo warfare.

I still adhere to the opinion that torpedo-vessels with outriggers will prove the most efficient means of destroying ships.

It was so during our late war, when those badly-constructed and slow-

moving "Davids" caused consternation to vessels on blockade duty, and destroyed some of our finest ships.

No other kind of torpedo-vessel can break up a blockade or accompany a fleet outside, and I hope to demonstrate practically in a short time that the only outrigger torpedo-vessel that we have will be the most formidable afloat. It can be made serviceable under all circumstances.

While I attach great importance to the torpedo as a means of offense and defense, I am yet afraid that we will run into the error of supposing ships of war can be driven from the ocean by means of it alone. Some imaginative people think that ships and guns will avail nothing hereafter, but the torpedo will do all the work, while others, who have not paid much attention to the matter, consider the torpedo of little practical utility. Both these conclusions are erroneous.

The torpedo, after all, is but an adjunct, and there are certain times only when it would have advantage over great guns, as a Remington rifle or a Colt's revolver would, under certain circumstances, be preferable to cannon in a fort.

The torpedo, although an important addition to other means of warfare, will not do away with anything that has preceded it. Ships will only be built stronger and faster and guns heavier, while improvement will continue to be made in the torpedo and ingenious devices introduced to avoid it.

Our legislators must not delude themselves with the idea that the invention of the torpedo is going to decrease the expenses of the Navy. On the contrary, it calls for an increase to the extent that the torpedo may be required, and also for a corresponding increase in ships, heavy guns, and rams.

A people with an extensive coast, great commerce, and a habit of talking war, cannot avoid the responsibility of supplying their Navy with all the new inventions for conducting hostilities. They will find them all needed sooner or later.

Torpedo experiments, as we conduct them, are inexpensive, and I doubt if a dozen members of Congress have noticed the appropriation, the amount is so small; and I believe the Naval Committee were very favorably impressed with the torpedo establishment and the experiments conducted in their presence.

I think it would benefit the Navy if the results of the experiments at Newport were published immediately after they took place, and distributed to the service, for I think that our officers, with the exception of those stationed at the school, know less about what is going on than do those of foreign navies.

We are not so much in advance of the rest of the world that we need keep these torpedo matters secret, and there is always a way of getting at the truth if an outside person desires to obtain information. We often obtain books and plans from Europe which the originators thought perfectly secure in their own hands, and the same thing happens with regard to our own "secrets." A wiser plan would be to supply our officers with all results, impressing upon them the importance of not divulging such matters.

I am not quite sure, however, but that the wisest plan would be for belligerent nations to interchange their information in regard to destructive inventions. This would tend in a great measure to maintain the peace of the world, as I have always noticed two men, both armed to the teeth, when together are apt to be particularly civil to each other.

At this moment torpedo experiments on a large scale are being con-

ducted abroad, and I think it would be wise to keep several intelligent officers in Europe for the purpose of witnessing these performances. Foreign governments find it advisable to keep naval officers attached to their legations in the United States, where experiments are conducted on a much smaller scale.

A COMPARISON WITH FOREIGN NAVIES.

While we have been satisfied with our iron vessels built during the civil war, many of which proved worthless, the following is the result of the enterprise of foreign nations, who seem to vie with each other in the race of building iron-clads and casting heavy guns.

England has built and is building, since the introduction of iron-clads, fifty-five vessels, of 322,858 tons, iron-clads, armor-plated ships, and iron-plated gun-boats. France has built forty-four iron-cased vessels of all kinds, or 188,375 tons; Russia, twenty-four iron-plated vessels, or 67,000 tons; Italy, twenty-two, or 75,101 tons; Austria, nine, or 36,119 tons; Turkey, four, or 16,884 tons; Spain, eleven, or 42,000 tons; Sweden, five, or 5,100 tons; Denmark, six, or 10,836 tons; Holland, five, or ——— tons; Germany, eleven, or 63,776 tons; one hundred and ninety-six iron-clads, all told, to say nothing of Chili and Peru, which have a larger force of these vessels than the combined forces of all the foreign nations on their coasts.

The nation that seems to be advancing most rapidly in naval power is the German Empire, which, from having a very small force of vessels in 1869, has now a very respectable one, and in a few years will possess an iron-clad navy only inferior in size to those of England, France, and Russia.

This example of Germany shows how soon a navy can be built up with energy and determination, and the fact of her devoting so much attention to this matter will ultimately give her great weight in the councils of Europe, enabling her to carry out a policy in conflict with some of our most cherished ideas.

Germany has pursued a very sensible course for a power weak in naval resources.

She has commenced at once to build twenty-eight light and comparatively inexpensive torpedo-vessels while getting in order and increasing her fleet of iron-clads. Thus far she has made no mistakes in the construction of iron-clads, and I receive from Brazil a report of a beautiful steam-sloop, carrying the German flag, and a great improvement on modern vessels of war. Her battery is a model.

With her eleven iron-clads and twenty-eight torpedo-vessels, the German navy would be a match for an equal number of iron-clads of twice the size without torpedo-boats.

When Germany emerged from the late war with France she was not a naval power; but finding the necessity of becoming one to protect her coasts and commerce, she took immediate measures to increase her naval resources.

Germany has now appropriated $72,000,000 for the purpose of building up a navy, so that in 1884 she will have about twenty-six iron-clads and rams of the heaviest tonnage; sixty swift clipper-steamers, averaging 1,500 tons, with heavy batteries; and thirty sea-going torpedo-vessels; leaving $15,000,000 for docks and improvements in navy-yards and arsenals.

This is independent of the annual appropriations, and shows how

indispensable it is considered by a nation advancing in power and increasing in commerce to maintain a large force of war-vessels.

In the aggregate, $72,000,000 seems a large sum; but when apportioned to the several years in which it is intended to complete the work, it appears like only a moderate expenditure.

We could afford it just as well as Germany, and we need an increase in our Navy more than any European power.

Six millions a year properly expended would in ten years put us in condition to resist encroachments, and to maintain our rights in any part of the world.

England has built but one torpedo-vessel, but the English, with their vast workshops, could turn out torpedo-boats faster than we could steam-launches. They are by no means indifferent to the importance of the sea-torpedo, and we must not form an unfavorable impression of torpedo-vessels because England has not done more in that direction.

The British have a number of quick-working iron gun-boats for harbor defense, that could soon be converted into torpedo-vessels.

We cannot afford to look idly on while all other nations are adding so rapidly to their naval resources. Every step they take leaves us so much more inferior to them, and we must finally lose that naval prestige of which we are justly proud, and abandon all claim to equality on an element quite as natural to our own people as to any sea-going nation.

While I am an advocate for the practice of naval tactics in large vessels, yet I think it would be better to commence with steam-launches at the Naval Academy, where not only the evolutions of fleets should be taught, but also the best system of attacking in torpedo-vessels and rams, to exhibit the confusion and difficulties incident to a battle.

The text-book in use at the Academy is well adapted for giving a general idea of the management of a fleet out of battle, but to manage an iron-clad fleet during an engagement a different system of tactics will be required.

In whatever manner a line of battle may be formed, it will be found that the ships will have to be arranged in groups of three; that is, three vessels forming a triangle and preserving that order as nearly as possible throughout a battle. Vessels in groups of three can support each other and preserve order better than by any other arrangement.

When a fleet is enveloped in smoke great uncertainty in regard to signals must exist; and, as I have said before, "at the commencement of a battle the responsibility of the admiral ends, and that of the commanding officer of ships commences." A long line of battle would soon be disarranged, but it would be possible to keep three vessels together in a triangular form where they could attack in concert and defend each other with certainty.

I invite attention to this subject, and trust it may be introduced into the study of naval tactics now taught to young officers.

There are several matters which I have mentioned in former reports, and to which I again beg leave to draw your attention.

1st. The apprentice system, which is necessary, if only to educate a set of good petty officers for the Navy. It seems rather inconsistent to provide such an excellent school for educating officers while doing nothing for the seamen.

In a few years more all the old stand-bys, the petty officers, will have disappeared from the Navy, and it is a question as to who will fill their places.

We require at least 1,000 boys in addition to the seamen, ordinary seamen, and landsmen now shipped for service, though 2,000 would be

better. These, educated and drilled on the plan I submitted to you in a former report, would, in the course of ten years, furnish petty officers, seamen, and ordinary seamen for the entire Navy.

On a late occasion, when it was necessary to fit out ships with dispatch, we had to enlist many inferior men, and the ships sailing in great haste, without time to properly drill their crews, were very inefficient as vessels of war.

I received letters from the several commanding officers at the time, and did not envy them the responsibilities they had incurred.

The entire expense of 1,000 boys would be, for pay, $120,000; rations, $108,000; total, $228,000 per year; or, by reducing the number of ordinary seamen 700, we could maintain 1,500 boys at the rate of $161,000 per annum. At the end of four years one-half these boys should be able to do thoroughly the duty of ordinary seamen, and after that time would add 750 ordinary seamen yearly to the Navy.

In twelve years the Navy would be manned entirely by American seamen.

2d. A more perfect method of ventilating ships is required. Imagine a crew of 250 men shut up at night on the berth-deck of a ship in the tropics, inhaling the foul air from the vessel and the fetid atmosphere of each other's breath. No wonder ships' crews contract epidemics which often decimate them.

I have examined a plan of ventilation devised by Assistant Engineer G. W. Baird, of which I highly approve, and I cannot do better than inclose his statement herewith.

3d. The introduction of steam-capstans into all ships of the Navy.

4th. Steam-cutters to be built with more buoyancy and more flare to the bow. These we have at present are wet in a sea-way and unsafe.

5th. Uniformity in boats' sails. This was at one time established, but at present the subject does not receive that attention which it merits. The plans furnished in 1869 were good and serviceable, and should be adhered to.

We have gone back to the use of the old lug-sail for boats, an unsightly and unserviceable arrangement; and commanding officers, unable to make it useful, rig their boats pretty much according to their own fancy.

The *Alarm* and the *Intrepid*. On the 28th ultimo I went on board the torpedo-vessel Alarm to witness the working of the "Fowler Steering Propeller," with which she is fitted.

For this purpose the vessel proceeded down New York Harbor to within a short distance of Sandy Hook. The trial was not for the purpose of testing the vessel's speed; the engines were not quite in condition, and as I had given only twenty-four hours' notice of my intention to make the trip, the engineer in charge did not think it advisable to work the engines up to full power. The trial was in every respect gratifying, and the performance of the vessel exceeded my expectations.

The working or manœuvring capacity of the Alarm is extraordinary, and I doubt if any vessel afloat can equal her in that respect. She worked up to eight knots, carrying only fifty pounds of steam, throttled off and all the furnace-doors wide open. When running at full power, the vessel is calculated to carry ninety pounds of steam, the boilers having been tested at one hundred and twenty pounds hydraulic pressure. With fifty pounds of steam she made forty-eight revolutions; with seventy-five pounds she would make about seventy-five revolutions. The Catalpa, a fast tug of 196 tons, making fifty turns, only kept way

with the Alarm, showing that there was very little difference in the power of the two propelling forces, the Alarm being 311 tons.

The model of this torpedo-vessel seems perfect, as she did not break the water on any part of the hull, or show anything more than a slight ripple astern, while running eight knots. While going at a speed of about seven knots the wheel was reversed, and in thirty-one seconds the vessel was moving in the opposite direction (astern) with nearly the same steam and speed, and working as well as when going ahead. While going about seven knots and making forty-five turns the wheel was put at right angles to the keel, when the vessel made a complete turn on her center in about 3′ 30″, and she would turn even quicker than this with more revolutions. I noticed that an increase of about five turns above forty-five made a great difference in the speed of the Alarm, and without doubt when carrying all steam and making the full number of turns of which she is capable she will run over ten knots (or 11.5 miles) an hour.

The condition of the engines, however, was such that the engineer did not deem it safe to run them with power on that occasion. The journals heated considerably and there was a good deal of thumping of machinery, but all this will disappear when the engines are run for a short time.

I think the contractor has furnished the Alarm with a good pair of engines; the work appears to be well done throughout. On the whole I am pleased with the vessel, and am satisfied she will fulfill what is expected of her. She carries her fifteen-inch gun well, and could have been fitted to carry a twenty-inch gun, provided she did not have to encounter a heavy sea; this is remarkable in so small a vessel.

I also examined the Intrepid, and found her a good, strong vessel, having made considerable speed with full steam-power. She is rather heavy for a torpedo-vessel, not working so handily as is desirable for that purpose, and not being fitted with outrigger torpedoes, but she is an admirable ram, and with her weight and momentum when under way would sink any vessel with which she came in contact without injury to herself. She is well adapted to harbor-defense, and, perhaps, would do more damage to an enemy than a torpedo-vessel, the ram ranking higher than the torpedo in naval warfare. The Intrepid could easily be arranged to carry a fifteen-inch gun by taking out her mast and placing her pilot-house a little differently; in which event she would be a formidable vessel for harbor-defense.

In fact, for harbor and coast defense, I think both the above-mentioned vessels will prove valuable additions to the Navy.

RECEIVING-SHIPS.

All the receiving-ships have been examined and found to be in the following condition:

New Hampshire, Captain Quackenbush, at Norfolk, Va. Very clean; regulations carried out; exercises of recruits at the guns; rigging too bad for exercises aloft; crew 80, including band; marines, 27; recruits on board, 1; fire-quarters, good; bottom, sound; upper works, rotten.

Sabine, at Portsmouth, N. H., Commander Irwin. Very clean; hull, good; upper works, rotten; regulations carried out; no recruits; has exercises when recruits are on board. Fire-quarters, good; crew, 47; marines, 25.

Ohio, at Boston, Captain Badger. Clean and in good order; bottom sound; all upper works rotten; decks very bad. No exercise aloft on account of state of rigging and spars. Regulations observed. Another ship should be provided. Crew, 73; marines, 23; fire-quarters, good.

Vermont, at New York, Captain Low. Clean and in good order; regulations observed. Ship not rigged. Hull tolerably sound. Fire arrangements good, except at low water they can use only four streams instead of five, which can be remedied by another connection with the supply-pipe on board. As the ship grounds at low water, the force-pump is useless at that time. Has no fire-extinguisher. Crew, 100; marines, 57; recruits, 125.

Potomac, at Philadelphia, Commander Pendergrast. Clean and in good order; regulations observed; rigging complete; exercise only at the mizzen-topsail. Fire-quarters good; bottom sound; upper works decayed. Has exercise of guns and small-arms. Crew, 28; marines, 24; recruits, 160. Ordered to be transferred to New York.

Relief, at Washington, Lieutenant Farenholt. Clean, good order; housed over; no exercise. Recruits, 8; crew, 22. Arrangements for fire good. Arrangements for health and comfort of recruits excellent on board all the receiving-ships.

All vessels going to sea have been carefully examined by the inspecting board, and found efficient in every particular.

The people of this country are so deeply immersed in business and politics that they give little attention to the necessities of a navy; while building up the industries of the country, they forget that these want protection on the high seas as well as on shore.

Our cities abound with policemen for the protection of property, but the high seas can scarcely be said to be policed by American ships of war, and but for the navies of foreign powers, the ocean would swarm with pirates.

Our citizens abroad are frequently obliged to go to the French or English admirals for protection, and in the Pacific Ocean our missionaries, who are doing much good in civilizing the savage islanders, have to depend almost entirely on foreign navies, as we have not ships to send among them.

Those familiar with the subject will admit that our Navy, small as it is, has performed its legitimate duties faithfully in the past, and that at present its officers are doing their best to keep up with the advance in professional knowledge.

From the foundation of our Navy, its officers have not only done their duty in war, but have in times of peace added largely to the geographical knowledge of the world, opened up commerce with the remotest countries, and by careful surveys made clear to our merchant-vessels the pathway across the ocean.

Compare their explorations with those of the most enterprising navigators of former times, and our officers will not suffer by the comparison. Many of the old voyagers left but meager accounts of their discoveries, while our explorations have always been conducted in such a manner as to benefit the whole human race.

Whatever romance may attach to the early navigators, they were in truth bold adventurers, pushing their frail barks into stormy seas, and in many cases leaving scarce a clew to the points they visited.

Our officers, with the hardihood of their predecessors, possess a knowledge of geodesy that has enabled them to determine with exactitude the position of every coast and hidden danger, and our charts are now in use by all commercial nations.

Everybody remembers the expedition under command of Lieutenant Wilkes, which visited all parts of the world, and made charts of every place it visited.

The expedition performed an amount of labor almost herculean, of which our merchant-ships are reaping the benefit at this day.

Commodore Perry, at the head of a naval squadron, opened to the world the commerce of Japan, which had been lost to it for centuries. The benefit of his action is seen by the increase of our commerce in that quarter of the globe, and by the multiplication of American mail-steamships to China and Japan, which will finally be an assistance to us, though a small one, in time of war.

Our Navy has been active in the exploration of the Arctic and Antarctic Oceans, and the vast waters of the Pacific, and, in proportion to its size, has done more toward extending a knowledge of the physical geography of the land and sea than that of any other nation.

It is now, as it always has been, engaged in useful astronomical labors, and in long and dangerous voyages, and every portion of our country is interested in its maintenance.

When the small outlay for the support of the Navy is considered, it is unwise economy to withhold what is required to enable its officers to maintain the honor of the flag, and be ready to defend at all times our coasts and harbors against the depredations of an enemy.

Respectfully submitted.

DAVID D. PORTER, *Admiral.*

The Hon. SECRETARY OF THE NAVY.

Report of Passed Assistant Engineer G. W. Baird on Ventilation.

U. S. S. PENSACOLA, PAYTA, PERU.
October 26, 1872.

ADMIRAL: Since 1863, when the statistics of medical officers proved so conclusively that the "sick-list" of our monitors was less in proportion than on board the wooden ships, and the cause was simply *ventilation*, I have made the subject a special study, hoping by investigation, research, and inquiry to be able at some future day to devise the necessary apparatus for the best ventilation. I have carefully prepared a brief paper for you, which I inclose, hoping that you will accept it in the same spirit that I send it to you.

If you will be kind enough to read my paper you will see my plan is well founded, no portion of it being the result of idle fancy, but is deduced from the soundest laws and direct experiment. I have mentioned the subject to several of our naval constructors, but without success.

The apparatus I propose is certainly of small cost, and may be adapted to any or all ships.

I am, sir, very respectfully, your obedient servant,

G. W. BAIRD,
Second Assistant Engineer.

VENTILATION.

When "hot-air" furnaces were first fitted to buildings, particularly the public buildings of the city of Washington, there was, of course, objection to them. There is always objection to anything new, though

and a deaf ear was given by Architects and other professional men to the elderly clerks, who complained of headache and nausea from the artificially-heated air. These old gentlemen were, I remember well, at once called "Old Fogies," and the barbarous practice of hot-air ventilation was continued.

When the monitors were put in commission I observed, with no little interest, their mode of ventilation. It was a cold blast of natural air through the ships by means of Dempfel's blowers, run at a high velocity. The temperature in the engine and fire room often reached 160° F., but still the number of sick was proportionally less than on wooden ships, where it rarely reached 115°. The only reason any one dared ascribe to this was the superior ventilation.

At that time I happened to be attached to the Pensacola, in the West Gulf blockading squadron, a vessel whose machinery was designed as an experiment.

Behind the cylinders, which were horizontal, the thermometer stood steadily at 160°. A common lamp would not burn there five minutes. I had found this the case on other ships behind the engines, where the temperature was not more than 115°, and it had been decided, by older officers, that the atmosphere at that temperature was too rare to support combustion.

Inexperienced as I was, I was not prone to contradict flatly the statements of my superior officers, yet I was confident such was not the case. Sir Humphrey Davy had estimated the temperature of flame to be greater than the white heat of metals, and it was not likely that the rarity of these gases could be so great as to fail in supplying the flame of an oil-lamp.

There were two 15-foot Dempfel blowers kept running constantly while the engines were in operation, forcing immense volumes of air into the fire and engine rooms; but neither the temperature nor the quality of the gases was sensibly affected. There were subsequently two 10-inch ventilators erected, one behind each pair of the main cylinders, and running up 5 feet above the spar-deck. When trimmed face to the wind they made no reduction of temperature, at least noticeable on a thermometer, which was kept hanging on a bulk-head near; but when trimmed back to the wind, a strong blast of hot air ascended, carrying, of course, the noxious vapors that had banked up beneath them.

The cylinders being unjacketed, the passing currents of fresh air were rapidly heated, so that the reduction in temperature was not worth noting; but while in that position, a lamp could be kept burning in this hot place as well as on the gallery. From this experiment I deduced that the cause of the extinguishing of the lamp was not "the rarity of the atmosphere," but because it was not rich enough in oxygen.

The foul gases banked up in the close offices in Washington, heated and reheated by a hot, foul blast, and the aged clerks who "preferred the old grate-fires," immediately recurred to me. It was very plain now that they should experience ill-health under such trying circumstances. I was also delighted to find that a man could remain some time in that hot place, when the little chimneys were up, (for they were the opposite to what were termed ventilators,) whereas it was impossible to remain there five minutes at a time before that without fainting. This was very important to us, as the cut-offs on the outboard ends were continually becoming deranged, and required constant watching and adjusting. It was no longer disputed that life could be supported at those high temperatures, provided the atmosphere were kept pure. In New York City

there has recently been established a process for silvering the backs of mirrors, where the temperature is kept uniformly at about 130°, and the workmen are said to enjoy good health. The air to this apartment is supplied by a rotary blower, and passes through water previous to its admission into the room. The water serves to arrest all the dust, and absorbs the foreign gases contained in the air. This air is exhausted from the room by means of ordinary chimneys, which it enters through apertures near the floor.

Professor Leeds, in recent lectures at the Franklin Institute, has treated this subject very beautifully and learnedly. He has found, by analysis, that there are from 50 to 72 parts of carbonic gas in 10,000 in our school-rooms, lecture-rooms, and bed-rooms, but there is probably no public nor private room in any of our large cities where this poison gas is so great as on the berth-decks of our wooden vessels of war. To walk from the ward-room to the sick-bay (along the berth-deck) of this splendid ship (Pensacola) at night, will nauseate the halest officer on board.

Professor Leeds estimates "that the number of deaths in the United States last year (a year of profound peace) from poisonous gases, caused by illy-ventilated apartments, was greater than the entire number killed during the late war." If such is the condition on shore, what must be the suffering of our poor sailors?

The specific gravity of carbonic-acid gas is 1.524, a little more than one and a half times the weight of air, having the same tension and temperature. As soon as exhaled from our lungs, this gas has a tendency to fall to the ground at once, and were it not for its diffusion with the other gases present, it would gradually bank up and poison a whole apartment, but the hatches are left open, and fortunately part of it escapes after diffusion.

There are always currents of air through ships, whether the wind-sails are down or not, but these currents are sluggish, and before the heavy vapors can be raised to the hatches, the only escape, they diffuse with the air, and partially poison every current of it.

A strong current of fresh air will often give cold to men if blown upon them, particularly if it is directed upon their feet. I have often stood under a wind-sail, in the engine-room, in a dripping perspiration, without the slightest inconvenience so long as the air was blown upon my head, and never taking cold from it, but if my air-port is open at night, and a light draught is directed upon my feet, it always results in a cold.

What I propose is this: to place a flat tube, provided with small registers, on each side of the berth-deck, reaching from stem to stern, and produce a vacuum inside these tubes by an air-pump, the air-pump to be driven by a steam-engine. The exhaust steam from this engine could be turned into the distilling-apparatus, and collected as drinking-water for the crew.

The hatches being open for the admission of fresh air, a current of low velocity will be established, while all the heavy and moist gases will be at once drawn off and exhausted into the smoke-pipe, whence I propose to conduct the gases. This would assist materially in drying the deck. The registers upon the tube may be simple valves like the draught-doors upon a stove, and may be easily regulated. There may be one in each room, in the cabin, ward-room, and steerage, to be regulated to suit the fancy of each inmate.

Such an apparatus would not occupy any appreciable space, and its cost for a ship of the first class would not exceed ($1,000) one thousand dollars, and it would cost nothing to run it, as the steam would be

exhausted into the distiller and saved for drinking and culinary purposes.

The life-time of the American seaman has been estimated by different authorities to be from nine to thirteen years, and a large percentage of the deaths can be traced directly to ill ventilation.

Very respectfully,

G. W. BAIRD.

Approved:

DAVID D. PORTER, *Admiral.*

15 N

43D CONGRESS, 2d Session. } HOUSE OF REPRESENTATIVES. { Ex. Doc. 1, Part 4.

REPORT

OF

THE POSTMASTER-GENERAL;

BEING PART OF

THE MESSAGE AND DOCUMENTS

COMMUNICATED TO THE

TWO HOUSES OF CONGRESS

AT THE

BEGINNING OF THE SECOND SESSION OF THE FORTY-THIRD CONGRESS.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1874.

CONTENTS.

APPOINTMENTS.

POSTAL MONEY-ORDER SYSTEM.

MISCELLANEOUS.

CONTENTS OF APPENDIX.

Lost postage-stamps.

The number of packages of postage-stamps lost in transmission through the mails was two, valued at $175; and of stamped envelopes, &c., one, valued at $8.15. This is the smallest number of losses ever sustained during any year.

DEAD-LETTERS.

Dead-letters received; number of applications, &c.

A tabular statement appended to the report of the Third Assistant Postmaster-General fully sets forth the operations of the dead-letter division of that office during the past year, which may be summarized as follows: Number of domestic letters received, 4,348,473; number of foreign letters received, 253,300; total, 4,601,773—representing an actual or nominal value of $4,637,429.08. Number of letters delivered, 1,392,224, representing $3,909,868.46, (including 225,893 foreign letters returned, unopened, to the countries whence they came;) number filed for reclamation, 24,863, representing $240,183.62; number at the close of the year either remaining not acted upon or outstanding in the hands of postmasters for delivery, 561,767, representing $487,377; number which, containing circulars, or, failing in delivery and being worthless, were destroyed, 2,622,619. The number of applications for dead-letters was 6,420. In 2,140 of these cases the letters were found and properly delivered.

Amounts deposited in Treasury.

The amounts received during the year and deposited in the Treasury were—

From unclaimed dead-letters	$8,721 [illegible]
From proceeds of sales of waste paper	4,289 14
From proceeds of sales of post-route maps	329 [illegible]
From proceeds of sales of old carpets, &c	20[illegible] 11
Total deposited during the year	13,54[illegible]

REGISTERED LETTERS.

Increase in issues of registered packages.

The use of the registered-letter system by the public appears to be steadily increasing. The issues of registered packages to postmasters upon their requisitions during the past year were 30 per cent. greater than during the previous year. This increase is attributable in part to the reduction of the fee for registering domestic letters from 15 cents to 8 cents, which took effect on the 1st of January last, and in part to the increased care which the Department has given to the subject. It is not, however, practicable to present a detailed statement of the operations of this branch of the postal service, for the reason that the reports in reference to it from the post-offices throughout the country

have not been fully classified and recorded, owing to the want of sufficient clerical force to perform the work. Under careful management the registration system must grow into favor with the public, and, on account of the security afforded by it, eventually supersede the practice of transmitting money and other valuables through the ordinary mail.

CONTRACTS.

Transportation statistics.

There were in the service of the Department on the 30th of June, 1874, 6,232 contractors for the transportation of the mails on public routes.

There were at the close of the year 2,142 "special" offices, each with a mail-carrier whose pay from the Department is not allowed to exceed the net postal yield of the office.

Of public mail-routes in operation there were 9,761, (of which 824 were railroad,) aggregating in length 269,097 miles; in annual transportation, 128,627,476 miles; in annual cost, $15,402,057. Adding the increased expense which will result from the re-adjustment of the pay on railroad routes required by act of March 3, 1873, on routes from which the necessary returns were not received up to the close of the fiscal year, estimated at $523,527, the annual cost will be $15,925,584; and adding the compensation of railway post-office clerks, route-agents, mail-route messengers, local agents, and mail-messengers, amounting to $2,781,902, the aggregate annual cost will be $18,707,486.

The service was divided as follows:

Railroad routes: Length, 67,734 miles; annual transportation, 72,460,545 miles; annual cost, including $523,527 for re-adjustment, as above, $9,113,190—about 12.58 cents per mile.

Steamboat routes: Length, 18,369 miles; annual transportation, 4,078,725 miles; annual cost, $839,004—about 20.57 cents per mile.

Other routes, upon which the mails are required to be conveyed with "celerity, certainty, and security:" Length, 182,994 miles; annual transportation, 52,088,206 miles; annual cost, $5,973,390—about 11.47 cents per mile.

There was an increase over the preceding year in length of routes of 12,887 miles; in annual transportation, of 8,717,826 miles; and in cost, of $1,766,716. Adding the increased cost for railway post-office clerks, route, local, and other agents, $286,585, the total increase in cost was $2,053,301.

The railroad routes have been increased in length 4,277 miles, and in cost $1,332,467, against an increase last year

of 5,546 miles in length and $754,425 in cost. This disproportionate increase in cost is owing to the re-adjustment of pay under the act of Congress approved March 3, 1873.

RE-ADJUSTMENT OF PAY ON RAILROAD ROUTES.

Re-adjustment of pay on railroad routes.

By act of Congress approved March 3, 1873, the Postmaster-General was "authorized and directed to re-adjust the compensation hereafter to be paid for the transportation of mails on railroad routes" upon conditions and at rates prescribed in the act. The principal consideration upon which the rates of pay were to be determined was the average weight of the mails, to be ascertained by an actual weighing for a number of successive working-days, not less than thirty, the law directing the weights to be taken "after June thirtieth, eighteen hundred and seventy-three," so as to avoid including therein the mass of free matter sent through the mails for the few months preceding the expiration of the franking privilege at the date named. A call had been made in February, 1873, upon the railroad companies in the New York and New England section for a weighing in March, 1873, with a view to the re-adjustment of their pay for the new contract-term commencing on the 1st of July of that year. The new act rendering the returns submitted under that call useless, another weighing was asked for, to commence October 1, 1873, not only in New York and New England, but throughout the country. This call was very generally responded to, and the results are exhibited in Table E in the appendix to this report. Upon the returns so submitted, the pay from July 1, 1873, has been re-adjusted upon 415 routes, of which the rates were increased on 327 and decreased on 88, the net result being an increase of $1,254,327.46 in the amount of annual pay. To include in the re-adjustment the routes yet to be heard from, it is estimated that a further increase of $344,021.54 will be necessary, making the whole amount $1,598,349. The details of the re-adjustment are shown in Table F in the appendix, together with the adjustment of the pay on 52 new routes. The act authorizing the re-adjustment appropriated half a million of dollars, "or so much thereof as may be necessary," for the increase of pay which it was expected to occasion. Besides this specific sum, the regular appropriation for "inland transportation" may be regarded as including an allowance for the usual increase caused by the re-adjustment of pay on railroad routes, which had been in progress for a number of years before the passage of the act of March 3, 1873. The increase on this

account for 1872, as shown by the report for that year, amounted to $354,865.94. The increase for 1873 was only $223,823.55, but the falling off from the amount for the preceding year thus apparent resulted from the fact that in consequence of the passage of the act of March 3, 1873, the re-adjustment of pay on routes in the New York and New England section for the contract-term commencing July 1 of that year was postponed to await the receipt of the new returns required by that act. The cost of "inland transportation" for 1873 was 8½ per cent. more than for 1872. Adding the same percentage to the $354,865.94 increase by re-adjustment for 1872, the increase for 1873, if it had been completed that year, would have amounted to $385,029.54. The appropriation for "inland transportation" for 1874, apart from the half million specifically provided for the increase of compensation on railroad routes, was 8⅚ per cent. more than the cost for 1873. Adding this latter percentage to the $385,029.54 to which the increase by re-adjustment for 1873 would have amounted, the usual increase for 1874 may be set down at $419,040.48. Adding this sum to the $500,000 specifically provided by the act of March 3, 1873, the whole amount applicable to the increase by re-adjustment, both specific and usual, for 1874 may be stated at $919,040.48. But this amount falls short, by the sum of $335,286.98, of covering the increase shown in Table F, and, adding the $344,021.54 estimated to be necessary to include in the re-adjustment routes yet to be heard from, the whole deficiency, or, in other words, the whole excess of cost over the appropriations applicable to the case, will amount to $679,308.52. This excess results from the fact that the weights of mails taken subsequently to June 30, 1873, as the basis for the re-adjustment, were much larger than the weights previously taken, upon which the estimates for the appropriations were based.

In 1867, the first year that mails were weighed, the largest weight carried on any road was 23,000 pounds, and there were about 340 miles of road transporting 20,000 pounds and upward. In 1874 the largest weight carried on any one road was 39,170 pounds, while on between 2,400 and 2,500 miles of road are transported 20,000 pounds and upward, and on over 1,000 miles of road are transported 30,000 pounds and upward.

In 1858 the average pay to railroads per mile was $115.77; in 1867 it was $112.08; in 1873 it was $114.36; but in the mean time the bulk of mails had increased at least threefold, and the space occupied on the cars was at least doubled.

The law of 1845 was so framed that the maximum pay allowed to any railroad was $375 per mile. This maximum pay was given roads transporting 18,500 pounds of mail and over.

As shown above, the mails were continually increasing. Additional facilities were demanded, especially on roads where railway post-office service was established; in return no additional compensation could be given to railroads receiving the maximum pay, but roads receiving less than the maximum were allowed $25 per mile per annum for furnishing postal-car facilities. That additional compensation could not be allowed to roads already receiving $375 per mile was a just and growing cause of complaint on their part, and a serious source of embarrassment to this Department.

This the law of March 3, 1873, was intended to obviate. It was intended proportionately to compensate those railroads that were transporting more than the weight necessary to obtain the maximum compensation, so that in return the Department could obtain the additional facilities that were so imperatively demanded by the increasing mails.

POST-ROUTE MAPS.

Post-route maps.

The work of the topographer has been continued and extended. Besides two new editions during the year of all the maps hitherto issued, four sheets of a map of Arkansas and part of the Indian Territory have been finished and distributed, and sheets are completed, and will be issued at an early day, forming maps of Virginia and West Virginia, of North Carolina and South Carolina, of Alabama and Mississippi, and of Louisiana and Texas. Maps of the other Middle and Southern States will be prepared as early as practicable. Owing to the want of correct and sytematic surveys in some of these States, greater difficulties will be encountered in compiling the maps, and delay may occur on that account.

FINES AND DEDUCTIONS.

Fines and deductions.

The amount of fines imposed upon contractors and deductions made from their pay for failures and other delinquencies, for the year, was $72,149.42, and the amount remitted during the same period was $8,524.21, leaving the net amount of fines and deductions $63,625.21.

MAIL BAGS, LOCKS, AND KEYS.

Mail bags, locks, and keys.

A table appended to this report exhibits in detail the number, description, and cost of mail-bags and mail-catchers, and of mail-locks and keys, purchased under contracts during the year. Of locked mail-bags (used for letters) there were 16,015, of tied mail-bags (used for printed matter) there were 60,556, and of mail-catchers (used for exchanging mails with postal cars under full speed) there were 400. The total cost of bags and catchers was $124,903.75. The total cost of mail-locks and keys, including repairs, was $31,962.39.

THROUGH MAILS.

Through mails.

The usual through-mail tables, numbered from 1 to 32, are presented in the appendix. They show that for the year ending September 30, 1874, the average time to San Francisco from New York was 173 hours 32 minutes, against 179 hours 4 minutes the previous year—a gain of 5 hours 32 minutes; and to New York from San Francisco, 171 hours 1 minute, against 175 hours 28 minutes the previous year—a gain of 4 hours 27 minutes. The number of mails carried through westwardly between the same points in schedule-time this year was 597, and behind time 44, against 457 in time and 105 behind time last year; and eastwardly 327 in time and 38 behind time this year, against 235 in time and 130 behind time last year. Between Washington and New Orleans, mails were sent at the beginning of the year, in both directions, *via* Bristol, Knoxville, Cleveland, Dalton, Calera, Montgomery, and Mobile; in November, 1873, they were diverted, going south, so as to run, after passing Cleveland, *via* Grand Junction, and, going north, after passing Montgomery, *via* Atlanta; and in May, 1874, they were changed to run in both directions *via* Atlanta. The tables show the effect of these changes on the running-time, the average *via* Atlanta being the shortest. The average time going south this year was 78 hours 48 minutes, against 81 hours 45 minutes last year—a gain of 2 hours 57 minutes; and going north the average was 71 hours 3 minutes this year, against 72 hours 53 minutes last year—a gain of 1 hour 50 minutes. And on most of the other great through-mail routes there is a perceptible improvement both in speed and regularity, compared with the tables for the preceding year.

MAIL-DEPREDATIONS.

Mail-depredations.

The number of recorded complaints for the past year of missing letters of value was 5,233, of which 2,040 were registered and 3,193 unregistered. The registered letters contained, as reported, in bonds, drafts, and currency, $105,778.80, and the unregistered $189,301.70. Of the registered letters, 915 were satisfactorily accounted for, 507 are reported as actually lost, and 618 cases are in the hands of special agents for investigation. During the year 285 persons were arrested for violations of the postal laws and regulations. Of these, 99 have been convicted, 15 have been acquitted, 5 escaped before trial, 2 forfeited bail, prosecution was abandoned in 38 cases, and 126 are awaiting trial.

RAILWAY POST-OFFICES.

Railway post-offices.

A tabular statement hereto appended shows that the number of railway post-office lines in operation on the 30th June, 1874, was 63, extending over 16,414 miles of railroad and steamboat routes, an increase of 4 lines and 1,548 miles over the preceding year. The number of clerks employed was 850, at an annual cost of $1,058,200, an increase of 98 clerks and $117,200. Upon 13,271 miles the service is performed daily, upon 3,122 miles twice daily, and upon 21 miles four times daily, equivalent, in all, to 19,599 miles each way daily. Counting all the lines both ways, the aggregate service is 39,199 miles daily.

FOREIGN MAILS.

Statistics.

The total number of letters exchanged during the year with foreign countries was 28,579,045, an increase of 1,119,860 over the number reported for 1873. Of this number 14,885,989 were sent from, and 13,693,056 were received in, the United States.

The number of letters (single rates) exchanged in the United States and European mails was 19,967,042, an increase of 381,528 over the number reported for 1873.

The total postages on the letters exchanged with foreign countries amounted to $2,054,803.81, an increase of $33,492.95 over the amount reported for 1873.

The aggregate amount of postage (sea, inland, and foreign) on the letter-mails exchanged with the United Kingdom of Great Britain and Ireland, Germany, France, Belgium, the Netherlands, Switzerland, Italy, Denmark, and Sweden and Norway, was $1,438,800.65, an increase of $32,293.15

over the amount reported for 1873. The postages on letters sent exceeded the postages on letters received from the same countries in the sum of $72,888.15, being 5.06 per cent. of the aggregate amount. The postages collected in the United States amounted to $869,964.85, and in Europe to $568,835.80, the excess of collections in the United States being $301,129.05, or 20.9 per cent. of the entire postage-receipts on European correspondence.

Comparing the year 1874 with the year 1873, the rate of increase in the total number of letters exchanged with foreign countries was 4.1 per cent., and the rate of increase in the amount of postages thereon was 1.65 per cent. The increase in the number of letters exchanged with European countries was 1.95 per cent., and the increase of postages thereon amounted to 2.29 per cent.

The total weight of mails exchanged during the year with European countries was 1,935,303 pounds, (over 967 tons,) an increase of 109,906 pounds, (or 55 tons,) compared with the previous year. The weight of letter-correspondence was 404,237 pounds, and of printed matter and samples 1,531,066 pounds. The aggregate weight of mails sent to Europe was 946,911 pounds, and of mails received from Europe 988,392 pounds. The weight of letter-correspondence sent to Europe was 216,590 pounds, and of letter-correspondence received from Europe 187,647 pounds. The weight of printed matter and samples sent to Europe was 730,320 pounds, and of printed matter and samples received from Europe 800,746 pounds.

Cost of mail-steamship service.

The cost of the United States transatlantic mail-steamship service for the year 1874 was $235,373.81, being an increase of $8,628.04 over the cost of the same service for the year 1873. The payments made to the respective steamship lines conveying mails to Europe, receiving the sea-postages as full compensation for the service, were as follows:

The Hamburg-American Packet Company, for 51 trips from New York to Plymouth, Hamburg, and France	$52,227 05
The North German Lloyd of Bremen, for 87 trips from New York to Southampton and Bremen, and 33 trips from Baltimore to Bremen	41,488 13
The Inman Line, for 4 trips from New York to Queenstown	1,818 70
The White Star Line, for 55 trips from New York to Queenstown	40,709 86
The Liverpool and Great Western, (Williams and Guion Line,) for 50 trips from New York to Queenstown	58,276 83
The Cunard Line, for 25 trips from New York to Queenstown and Liverpool, and 54 trips from Boston to Queenstown and Liverpool	29,521 77

The Eagle Line, for 10 trips from New York to Plymouth, Cherbourg, and Hamburg	$3,868 22
The Canadian Line, for 52 trips to Liverpool	6,731 33
The Red Star Line, for 14 trips from Philadelphia to Belgium	17 74
Steamers of Funch, Edye & Co., for 5 trips from New York to Norway	13 01
American Steamship Company, for 15 trips from Philadelphia to Queenstown	701 17
Total	235,373 81

The United States postages on mails conveyed to and from the West Indies, Panama, Central America, Brazil, Mexico, Bermuda, Nova Scotia, New Granada, Venezuela, and Ecuador amounted to $141,650.53, and the cost of the sea-conveyance thereof was $96,971.11. The United States postages on mails exchanged with Brazil, Japan and China, the Sandwich Islands, New Zealand, and Australia, by means of the subsidized lines of direct mail-steamers, amounted to $53,550.88. The total cost of the United States ocean-mail steamship service for the year 1874 (including $662,500 paid from special appropriation for steamship service to Japan and China, to Brazil, and to the Hawaiian Islands) was $994,844.92.

Expiration of contracts for European mail service.

The contracts heretofore made with the various transatlantic steamship companies for the conveyance of the United States mails between New York and European ports at a compensation equal to the sea-postages on the mails conveyed, expired by limitation on the 31st December, 1873. Under them the mails were dispatched from New York on but three days in each week, viz, Wednesday, Thursday, and Saturday.

New arrangement, securing more frequent and rapid communication.

Since the expiration of the contracts in question a new arrangement, proposed by my predecessor and accepted by the steamship companies, has been put into successful and satisfactory operation. Under this arrangement, which went into operation January 1, 1874, the European mails are dispatched from New York on four days of the week, viz, Tuesday, Wednesday, Thursday, and Saturday, the several companies furnishing, in time for the publication thereof by this Department, prior to the first of each month, a schedule of the sailings of their steamers for the month, and also from time to time, when called upon therefor, the necessary data from the logs and general records of the steamers to enable the Department to select and designate the vessels which shall carry the mails for the ensuing month.

The advantages sought and secured by this arrangement are more frequent service and greater rapidity of mail communication with Europe without additional cost; and it would seem evident that the competition incited by the monthly selection by the Department of the best and fastest steamers, and the constant control and surveillance of the service which the arrangement secures to the Department, must result beneficially.

Additional monthly service on China line.

The contract for the additional monthly mail-service between San Francisco and Japan and China authorized by the act of Congress approved June 1, 1872, was, after advertisement, in accordance with the requirements of that act, awarded to the Pacific Mail Steamship Company of New York, at an annual compensation of $500,000.

The company failing, however, to commence the additional service contracted for in such steamships, and at the time prescribed, both by the act of Congress cited above and the terms of their contract, when this Department was notified, in the month of July, 1874, nine months after the stipulated time, of the completion of two steamers built and designed for the service, it was deemed necessary to submit to the Attorney-General, for his opinion, the question of the company's right to have the new steamers inspected, and, if approved, accepted for the service under their contract.

Steamers accepted for the additional service, subject to future legislation.

The Attorney-General's decision, upon a full consideration of the case presented to him, having been to the effect that the contract with the company had not lapsed, but was in force, notwithstanding the failure to commence the service with the steamers and at the time provided, the steamers City of Peking and City of Tokio were inspected, as provided by the act of Congress of June 1, 1872, and, upon the favorable report of the Secretary of the Navy, were accepted by this Department for service under the contract with said company, with the understanding, however, that, as no appropriation was made by Congress at its last session for the additional monthly service contracted for, no payment could be made therefor until Congress should further legislate upon the subject.

Relinquishment of service between the United States and the Hawaiian Islands.

This Department was notified, under date of 7th February, 1874, of the relinquishment of the mail-steamship service between the United States and the Hawaiian Islands authorized by act of Congress, approved March 2, 1867, which went into operation, under a contract with the "California, Oregon and Mexico Steamship Company," on the 5th of September, 1867, for a term of ten years, at a com-

pensation of $75,000 for twelve round trips per annum. No service has been performed under the contract referred to since the 18th September, 1873, the date of the last arrival at San Francisco of the steamer Costa Rica, of said line, with the United States mails from the Hawaiian Islands.

My immediate predecessor communicated the above facts to the Post-Office Committees of the Senate and House, at the last session of Congress, in compliance with a resolution of the Senate, and in connection therewith stated his reason for not exercising the power conferred upon the Postmaster-General in the contract for this service to annul the same for repeated failures, and referred the question of a continuance of the service to the action of Congress.

Expiration of contract for steamship service to Brazil.

The mail-steamship service to Brazil, authorized by act of Congress approved May 28, 1864, which went into operation September 30, 1865, under a contract with the United States and Brazil Mail-Steamship Company, will expire, by limitation of law and contract, on the 30th September, 1875.

Convention with New South Wales.

A postal convention has been concluded with New South Wales, establishing an exchange of correspondence with that colony by means of the direct line of colonial mail-packets plying between San Francisco and New South Wales, as well as by such other means of direct mail-steamship transportation as shall hereafter be established, with the approval of the respective Post Departments of the two countries. This convention, a copy of which is appended, went into operation on the 1st of February, 1874.

Exchange of postal cards with Switzerland.

An exchange of postal cards with Switzerland has been established, on the basis of a prepaid postage of two cents in full to destination in either country. A copy of the additional articles of agreement providing for this exchange, which went into effect on the 1st of May, 1874, is hereto appended.

Convention with France.

The negotiations for several years pending between this country and France for an amelioration of the postal intercourse between the two countries terminated on the 28th of April, 1874, by the conclusion of a postal convention, establishing a rate of postage of 9 cents per half ounce on prepaid letters sent from, or unpaid letters received in, the United States, and of 50 centimes per 10 grams on prepaid letters sent from, and unpaid letters received in, France. While this convention is not as liberal in its provisions as could be desired, it is the most satisfactory arrangement that could be effected with that government. This convention, a copy of which is appended, went into effect on the 1st of August, 1874.

Additional article concluded with the Netherlands.

An additional article to the postal convention of 26th September, 1867, and to the additional convention of 10–29 January, 1870, has been concluded with the Netherlands, establishing a direct exchange of correspondence with that kingdom at reduced postage-charges. This additional article, a copy of which is appended, was carried into operation on the 1st of October, 1874.

Additional articles with Denmark.

Additional articles of agreement have been concluded with Denmark, modifying certain provisions of the postal convention with that country for the regulation of postal intercourse with that kingdom, and of the detailed regulations and forms for the execution thereof. These additional articles, a copy of which is appended, will be carried into operation on the 1st of January, 1875.

Convention with Japan ratified, and postal agencies discontinued.

The postal convention mentioned in the last annual report as having been formally agreed upon and executed with Japan was ratified on the 18th of April, 1874; and the government of Japan having given to this Department the notice required under article 21 of the convention, an order was issued by this Department for the discontinuance of the United States postal agencies at Kanagawa,(Yokohama,) Nagasaki, Hiogo, and Hakodadi, (Japan,) from January 1, 1875, the date upon which the said convention will go into effect. A copy of this convention is appended.

INTERNATIONAL POSTAL CONGRESS.

International postal congress at Berne.

The United States having been invited to take part in the international postal congress appointed to assemble at Berne, in Switzerland, on the 15th of September last, Mr. Blackfan, the Superintendent of Foreign Mails, was selected as the representative of this Department. His acknowledged ability and thorough acquaintance with the foreign and domestic mail-service of the country seemed to render his selection an eminently proper one. Mr. Rambusch, of the Office of Foreign Mails, was appointed to accompany him as an assistant. They reached Berne on the 18th of September. The congress had adjourned to the 21st of that month, and on that day, after a few remarks from the president of the congress, (M. Borel, Postmaster-General of Switzerland,) complimentary to the position of the United States on the question of postal reform, the gentlemen above named took their seats. Two sessions only had been held before their arrival.

A postal convention agreed upon.

On the 7th of October an international postal convention was agreed upon and signed by the delegates from all the countries represented, with the exception of France, whose

representative decided to defer his signature until the approval of the National Assembly could be obtained. It is generally believed that France will eventually give her adherence to the convention, and, should she do so, all of Europe, Egypt, Asiatic Turkey, and the United States will be included in the proposed postal union.

The convention will, of course, have to be ratified according to the laws and usages of each country participating in it before its provisions can acquire the force of treaty obligations. If so ratified, it is proposed that it shall go into effect on the 1st of July, 1875.

Its provisions.

The provisions of the convention are too numerous to be stated in detail in this report; those of primary importance are:

That a uniform letter-rate of six cents may be established to all countries included in the postal union, which will greatly reduce the existing rates to all countries except Great Britain and Germany.

The total abolition of accounts for international correspondence. This will not only save the expenses incident to keeping such accounts, but it will add largely to our postal revenues, as we shall retain the large excess of foreign postage which is annually collected in the United States, and, under existing arrangements, accounted for and paid quarterly to the respective foreign offices.

The countries forming the union are to constitute a single postal territory for the exchange of correspondence between their post-offices.

The relations of the countries of the union to countries outside of it are to be regulated by such special conventions as exist or may be concluded between them; and the rates of transport outside the limits of the union are to be settled by those conventions and added to the postage of the union.

The provisions of the convention are not to effect any alteration in the domestic postal legislation of any country, nor to restrict the right of the contracting parties to maintain and conclude treaties or to establish more restricted unions with the view of improvement of postal relations.

There is to be organized a central office, under the name of the International Bureau of the General Postal Union, which is to act under the supervision of the postal administration designated by the congress, and the expenses of which are to be paid by the contracting countries.

The liberty of transit through the entire territory of the postal union, and the right to send in transit through the in

termediary countries, are guaranteed, as well for correspondence inclosed as in open mails, the sending-office to pay the transit country two francs per kilogram for distances under seven hundred and fifty kilometers, and four francs for longer distances. These rates, however, are not to apply to the transit across the territory of the United States between New York and San Francisco.

The convention, when ratified, is to continue in force for three years, and may be prolonged beyond that period; but any country may withdraw from the union on giving notice one year in advance.

It is believed that all essential points affecting the interests of this Department have been guarded in the convention, among which may be mentioned the right to collect our postage by our domestic standard of weight, the elevation of the single weight for printed matter to two ounces, and the right to allow newspapers to go at a single rate, provided they do not exceed the weight of four ounces.

It is not deemed proper to make any recommendation at this time in reference to the ratification of the convention by this country. Mr. Blackfan was authorized to affix his signature to it, on the part of the United States, subject to the approval of the President and the Postmaster-General. It is expected that he will return soon after, if not before, the opening of the approaching session of Congress, when such action will be taken in regard to the convention as the interests of the Government and the Department may render necessary.

Instructions were given to Mr. Blackfan to take advantage of his presence in Europe to visit the principal post departments, after the adjournment of the congress, and to examine into the improvements in postal arrangements and facilities which might be found in foreign systems, with a view of introducing into our service such of them as might be advantageously put into operation here. This will necessarily delay his return, but not, it is believed, beyond the time above mentioned.

APPOINTMENTS.

The report of the appointment-office shows the following:

	Number of post-offices.
Number of post-offices established during the year	2,318
Number discontinued	1,268
Increase	1,050
Number in operation on June 30, 1873	33,244
Number in operation on June 30, 1874	34,294
Number filled by appointments of the President	1,408
Number filled by appointments of the Postmaster-General	32,886

Number of appointments.

Appointments were made during the year—

On resignations	5,354
On removals	907
On changes of names and sites	477
On deaths of postmasters	[illegible]
On establishment of new post-offices	2,315
Total appointments	9,424

Cases acted on. Number of cases acted on during the year 10,082

The number and aggregate compensation of special agents, route-agents, mail-route messengers, railway post-office clerks, and local agents in service during the year ended June 30, 1874, were—

Special, route, and local agents.

54	special agents*	$165,47[illegible]
850	railway post-office clerks	1,058,4[illegible]
936	route-agents	896,6[illegible]
211	mail-route messengers	136,540 [illegible]
124	local agents	94,710 [illegible]
2,175	Total	2,351,[illegible]

Free-delivery system.

Under the act of March 3, 1873, making appropriations for the service of the Post-Office Department for the year ended June 30, 1874, and providing for the employment of letter-carriers for the free delivery of mail-matter "at every place containing a population of not less than twenty thousand within the delivery of its post-office," the free-delivery system was established at thirty-nine offices.

The service was also largely extended in several of the principal cities. In and adjacent to Boston, thirteen post-offices, including three free-delivery offices, namely, Cambridge, Cambridgeport, and Charlestown, were discontinued, and twelve branch-offices established and placed under the control of the postmaster of Boston, and within the delivery of that office. The number of carriers was increased fifty-one, and the free-delivery system extended over the several localities formerly supplied by the discontinued offices. Five branch-offices were established in Chicago and placed under the control of that office, and the service extended, by the addition of thirty-three carriers, to meet the growth of the city and the increased demands of the service.

The post-offices of Williamsburgh (a free-delivery office) and Green Point, within the city of Brooklyn, were discontinued, and three branch-offices established and made a part of the postal system of that city. Twenty carriers were added to the force, and the delivery by carriers extended

* Other special agents charged to separate appropriations.

over the localities formerly supplied by the discontinued offices.

In Saint Louis five post-offices were discontinued and three branch offices established and placed under the control of the postmaster of that city. Thirty-six carriers were added to the force, and the service extended over the city.

Sixty-four carriers were added to the force in New York, and thirty in Philadelphia. At the latter office twelve one-horse wagons were allowed, to convey the carriers from the office to their routes and return.

Other additions and improvements were made in the smaller cities, but of not sufficient importance to call for special mention in this place.

Experience has confirmed the wisdom of the policy of discontinuing the smaller offices in and adjacent to large cities and substituting branch-offices and placing them under the control of the principal office. This policy of consolidating deliveries into postal centers, and distributing the carriers between the main office and its branches, shortens the routes and expedites the deliveries and collections, and insures a more harmonious service than could be secured by several independent offices within the same territory.

The general results of the service at the eighty-seven offices, notwithstandig the large number of new offices and the irregularities necessarily incident to the introduction of the system, show a gratifying increase over the preceding year.

The aggregate results were as follows:

Number of offices	87
Number of letter-carriers	2,049
Mail-letters delivered	166,020,370
Mail postal cards delivered	11,000,809
Local letters delivered	45,179,295
Local postal cards delivered	8,958,106
Newspapers delivered	56,468,582
Letters collected	177,898,474
Postal cards collected	16,298,325
Newspapers collected	21,562,436
Whole number of pieces handled	503,386,397
Amount paid carriers, including incidentals	$1,802,696 41
Average cost per piece	3.58 mills.
Amount of postage on local matter	$1,611,481 66

Showing the following increase, compared with last year:

Offices	39
Letter-carriers	550
Mail-letters delivered	25,061,483

Mail postal cards delivered	11,000,[illegible]
Local letters delivered	6,839,246
Local postal cards delivered	8,95[illegible],106
Newspapers delivered	13,077,917
Letters collected	40,832,775
Postal cards collected	16,28[illegible],325
Newspapers collected	6,002,[illegible]
Whole number of pieces handled	128,470,733
Amount paid carriers, including incidentals	$380,20[illegible]
Postage on local matter	$499,230 45
Per centum of increase of receipts on local postage	44.[illegible]
Per centum of increase in cost of service	26.7

A full and detailed statement of the operations of the service at each office will be found in the appendix.

Employés of the Post-Office Department.

The following table shows the number of employés in the Post-Office Department; also the number of postmasters, contractors, clerks in post-offices, route-agents, railway post-office clerks, and other officers in service on the 30th June, 1873, and the 30th June, 1874, respectively.

Departmental officers and employés:

	1873.	1874.
Postmaster-General	1	1
Assistant Postmasters-General	3	3
Superintendent of Foreign Mails	1	1
Superintendent of Money-Order System	1	1
Chief clerk to the Postmaster-General	1	1
Chief of Division of Dead-Letters	1	1
Chief of Division of Depredations	--	1
Topographer for the Department	--	1
Chief clerks of bureaus	4	5
Disbursing officer and superintendent of building	--	1
Clerks, laborers, watchmen, &c	342	34[illegible]
	354	3[illegible]

Other officers and agents:

	1873.	1874.
Postmasters	33,244	34,2[illegible]
Contractors	5,930	6,2[illegible]
Clerks in post-offices	4,025	4,2[illegible]
Letter-carriers	1,499	2,0[illegible]
Route-agents	862	9[illegible]
Railway post-office clerks	752	[illegible]
Mail-route messengers	171	2[illegible]
Local agents	110	1[illegible]
Special agents	63	[illegible]
Total in service	47,010	49,[illegible]

POSTAL MONEY-ORDER SYSTEM.

Number of money-order offices.

Since the publication of the last annual report of the Postmaster-General, at which time there were 3,069 money-order post-offices in operation, 346 new offices have been established and 11 discontinued, making the present number

3,404. Of the additional offices, 15 were opened at sub-post-offices or stations in large cities.

Issues and payments.

The number of domestic money-orders issued during the last year was 4,420,633, the aggregate value of which was		$74,424,854 71
The number of such orders paid was 4,416,114, amounting in value to	$73,736,435 01	
To which is to be added the amount of orders repaid to the remitters	473,721 24	
Total of payments		74,210,156 25
Excess of issues over payments		214,698 46

The fees received by postmasters for the issue of domestic money-orders amounted to $461,382.30. A gain of $16,908,638.02, or 29.4 per cent., in the amount of orders issued, of $16,441,422.74, or 28.7 per cent., in the amount of orders paid, and of $106,780.05, or 30.11 per cent., in the amount of fees received, is shown by these figures over the transactions of the previous year, as against a like gain in the business of 1873 over that of 1872 of 18.55 per cent. in issues, 18.33 per cent. in payments, and 1.23 per cent. in fees. During the last fiscal year the average amount of the money-orders issued was $16.83½, a decrease of 30½ cents since 1873.

Duplicate orders.

There were 16,979 duplicate money-orders issued during the year, of which 16,309 were in lieu of originals which were not received within a reasonable time by the respective payees, on account of change of residence or imperfect address, or which were claimed to have been lost in transmission by mail; 363 were issued for orders alleged to have been lost, and 61 for orders mutilated or destroyed while in possession of the remitter, payee, or indorsee; 14 were made payable to remitters, for orders obtained from them "by means of false or fraudulent pretenses, representations, or promises;" 29 were for orders destroyed by the burning of post-offices and mail-cars; 3 for orders lost by the robbery of a post-office; 178 on account of orders which became invalid because not presented for payment within one year after their issue; and 22 for orders which were invalidated in consequence of having received, contrary to law, more than one indorsement.

The number of duplicates issued last year was 2,458 greater than during the previous year, or 16.93 per cent., being less than the ratio of increase in orders issued by 12.47 per cent.

Receipts and expenditures.

The revenue-account of the domestic money-order system, as adjusted and reported by the Auditor, is as follows:

Receipts:		
Fees for money-orders issued		$461,3[illegible]2 30
For premiums on drafts		[illegible]56 24
Total		462,238 54
Expenditures:		
Commissions to postmasters and allowances for clerk-hire	$321,789 06	
Allowances to postmasters for remittances lost in transmission by mail	1,932 00	
Defalcations of late postmasters	10,538 32	
Incidental expenses	22,781 04	
Total		357,040 42
Excess of receipts over expenditures		105,198 12

Deposit of surplus funds.

This amount of revenue is greater by $36,614.12 than that of the previous year, an increase of 53.4 per cent. Surplus funds to the amount of $54,253,147.44, derived from the issue of money-orders at the smaller post-offices, were deposited by them at the larger offices designated as their depositories. Such deposits are made in registered packages by mail when the postmaster is unable to obtain national-bank drafts, which is generally the case at small post-offices. Forty-nine cases of remittances, amounting to $7,840.70, reported as lost in transmission, were under investigation during the year, nine of which, amounting to $1,340, were pending at the close of the previous year, and four, amounting to $450, were cases of loss during that year, but not brought to the notice of the Department until after the publication of the last annual report, making the reported losses of the last year $6,500.70, being $943.39 greater than those of the previous year. There was allowed $1,932 of this amount to the credit of the postmasters by whom the remittances had been made; claims for credits on account of four remittances, amounting to $550, were disallowed: in twelve cases the amount, $1,203.70, was recovered by special agents; and twenty-two unsettled claims, amounting to $4,155, are still pending. The postmaster at New York, N. Y., has paid drafts to the amount of $6,034,575 of postmasters to whom credits with him were from time to time allowed on account of the excess of their payments over their issues of money-orders. In the Pacific States postmasters who required assistance in meeting their money-order payments have been furnished with funds to the amount of $95,325 by the postmaster at San Francisco, Cal., and of $26,233 by the postmaster at Portland, Oreg.

Orders improperly paid.

It was alleged that out of the whole number of orders paid, to wit, 4,416,114, the payment of 74 was effected fraudulently by forgery of the signature of the payee or indorsee, or by other unlawful or improper means, being at the rate of one erroneous payment in 59,677 payments.

Ninety claims for re-imbursement on account of erroneously paid money-orders have been under consideration during the last year, sixteen of which occurred previously. In twenty-six of these claims the amount of the orders, being a total of $615.41, was recovered by special agents and paid to the rightful owners; in twenty-nine, amounting to $843.61, the paying postmasters were, after careful investigation, held responsible for the erroneous payments; in three cases the amount, $80, was refunded by the Department, the paying postmaster not having been found at fault; in ten the amount, $220.34, was, after due examination, found to have been improperly paid through negligence on the part of the remitters, payees, or indorsees, and the loss fell upon them; and twenty-two claims, amounting to $596.75, are still unsettled.

Exchange of postal orders with Switzerland, Great Britain, and Germany.

The number of orders issued in this country on Switzerland during the last year was 2,721, amounting to $72,287.28, and the number from that country paid here was 793, amounting to $21,222.16, showing, in comparison with the previous year's business, a decrease of $6,026.65, or 7.7 per cent., in the issues, and an increase of $4,412.58, or 26¼ per cent., in the payments. The fees received amounted to $2,006.50, and the expenses to $633.50. From the accompanying statement of the Auditor, it appears that, after the payment of all balances due Switzerland on the exchange of money-orders during the year, a net revenue of $881.48 accrued to the United States. The number of orders issued in this country on the United Kingdom during the last year was 77,351, amounting to $1,491,320.31, and the number from that country paid here was 15,992, amounting to $303,773.66, showing, in comparison with the business of the previous year, an increase of $126,843.99, or 9.3 per cent., in the issues, and $88,686.05, or 41.23 per cent., in the payments. The fees received amounted to $44,508.75, and the cost of commissions to postmasters, clerk-hire, incidental expenses, and miscellaneous items was $21,562.71. The number of orders issued in this country on Germany during the last year was 32,542, amounting to $701,634.73, and the number from that country paid here was 20,607, amounting to $535,216.72. A comparison of these transactions with the amount of orders issued, viz, $420,722.12,

and of orders paid, viz, $310,108.26, from the establishment of the German International Money-Order System, October 1, 1872, to the close of the fiscal year ended June 30, 1873, exhibits a large ratio of increase. The fees received amounted to $19,288.95, and the cost of commissions to postmasters, clerk-hire, incidental expenses, and miscellaneous items was $7,378.28. The Auditor has not the requisite data at present to enable him to furnish an exact statement of the revenue of the last fiscal year from the exchange of money-orders with Great Britain and Germany. That from the British business of the preceding year is reported by him at $14,055.65, and that from the German business at $7,795.23.

MISCELLANEOUS.

Prepayment of postage on printed matter.

By the act of Congress approved June 23, 1874, it is required that on and after the 1st January, 1875, postage on newspapers and periodical publications mailed from a known office of publication or news agency and addressed to regular subscribers or news agents shall be charged at the rate of two cents per pound if issued weekly or oftener, and at three cents per pound if issued less frequently than once a week. The act provides that the matter shall be weighed in bulk and prepaid with adhesive stamps to be specially devised for the purpose. The manner of applying the stamps is left discretionary with the Department, and a system, which it is hoped will work satisfactorily, has been devised for carrying the law into effect. The stamps are now in course of preparation, and will be ready at the time appointed for their use.

It is expected that the revenues of the Department from postage on printed matter will be increased by the enforcement of this act, notwithstanding that the rates are cheaper than before, as now the postage will be prepaid, while heretofore much loss has been occasioned to the Department on account of the non-collection of postage at the point of delivery.

Money-order business should be made self-sustaining.

The money-order business of this Department appears to be rapidly growing in public favor, and is undoubtedly a very great accommodation to a large number of persons who are not within the reach of banking facilities, or who are unaccustomed to the use of them. Yet I see no reason why this branch of the service should not be made self-sustaining.

Increase of fees recommended.

The apparent profits of the money-order system during the last year are about $105,000, while certain expenses

to the amount of $182,000, for clerk-hire and stationery in the Post-Office Department and the Auditor's Office, and for money-order blanks in post-offices, are not charged to the money-order business, but are paid out of appropriations, so that while the money-order system appears to yield a revenue of $105,000, there is, in fact, a deficit of $77,000. I suggest, therefore, that the fees for money-orders be increased, in accordance with the views of the Superintendent submitted herewith, (see appendix,) so that the money-order system shall, like any other business, be made to defray all its own expenses.

Rates of pay for railroad mail-service.

The number and length of mail-routes in the United States require an expenditure for transportation which dwarfs into insignificance the cost of similar service in other countries. For the year ending June 30, 1876, it is estimated that this item alone will exceed $18,000,000. The portion to be paid to railroads will amount to more than $10,000,000.

Opinions have differed widely as to the best method of determining the rightful rates of compensation to be paid to railroads for services rendered to this Department. Heretofore their pay has been based on the weight of mails, with an additional allowance on certain thoroughfares for providing postal cars. At present the matter is in a very unsatisfactory condition, and some equitable mode of adjustment should be at once devised, and sanctioned by law.

Some of the roads have represented to the Department that the carrying of the mails was little or no object to them, because the express companies were willing to pay much more for the accommodations furnished than the Department would allow. On the other hand, representatives of the leading express companies have contended that the act which took effect July 1, 1874, permitting the transmission by mail of packages of merchandise weighing not over four pounds, at the rate of one cent for each two ounces, is taking away the most profitable part of their business, and will soon render them unable to meet the heavy rentals demanded by the roads. Thus is presented a curious anomaly—the roads claiming that the Government does not pay as much as the express companies are ready to pay, and the express companies claiming, on the other hand, that the law is effecting such a diminution of their revenues that they are unable to accede to the demands of the roads. I find no disposition on the part of any railroad or transportation company to deal otherwise with the Department than in a spirit of fairness and justice. I trust that Congress will adopt some equitable plan of adjustment which will not be too burden-

some to the Government, and which will be satisfactory to the companies.

Appropriation for increased pay to railroads exhausted.

The act of March 3, 1873, re-adjusting the pay of railroads on the basis of weight of mails carried, added much more largely than was anticipated to the expenses of the Department. The appropriation for that purpose having become exhausted, I have declined to make further payments.

Appropriate sphere of the Post-Office Department.

I would suggest that the time has come when a resolute effort should be made to determine how far the Post-Office Department can properly go in its efforts to accommodate the public, without trespassing unwarrantably upon the sphere of private enterprise. There must be a limit to governmental interference, and, happily, it better suits the genius of the American people to help themselves than to depend on the state. To communicate intelligence and disseminate information are the primary functions of this Department. Any divergence from the legitimate sphere of its operations tends to disturb the just rule that, in the ordinary business of life, the recipient of a benefit is the proper party to pay for it, since there is no escape from the universal law that every service must, in some way, be paid for by some one. Moreover, in a country of vast extent, like ours, where most of the operations of the Department are carried on remote from the controlling center, the disposition to engage in lateral enterprises, more or less foreign to the theory of the system, may lead to embarrassments whence extrication would be difficult.

Excess of expenditures over receipts.

For years the franking privilege was an incubus on the Department and an obstacle to efficient postal reform. Its abolition, for which we are largely indebted to the resolution and wisdom of my predecessor, opens the way for other measures which have yet to be inaugurated and pressed to a successful issue before the Department can become self-sustaining. While I do not flatter myself that I shall be able to accomplish this most desirable end during the short period of my service, I propose to keep it steadily in view, and to direct my best efforts toward its attainment. For the first time in the course of a life devoted actively to business, I find myself in charge of an establishment the expenditures of which largely exceed its receipts—a state of affairs which strikes with peculiar force a mind more or less disciplined by that close inspection of accounts enforced in mercantile pursuits. In ordinary business affairs there is but one end to this condition of things—bankruptcy.

A policy of economy must be adopted and enforced.

The deficiency of this Department has varied of late years from 15 to 20 per cent., while from the best data at my

command I have been compelled to submit estimates for the year ending June 30, 1876, which will show an expected excess of expenditures over receipts of nearly $8,000,000, or about 25 per cent. of the entire revenues of the Department. How far the American people will be willing to go in this direction remains to be seen. The difficulties in the way of adopting and enforcing a policy of economy, which, while properly guarding the revenues of the Department, shall also afford to the new and growing portions of our country the mail facilities to which the enterprise of the people entitles them, are neither few nor small; but in some way they can and must be surmounted.

I deem it suitable to say here that I propose to guard with strict vigilance the expenditures of this Department, sanctioning no outlay which can be avoided without detriment to the service, and so to conduct its affairs generally that the interests of the public shall be paramount to those of any individual, corporation, or party.

Very respectfully, your obedient servant,

MARSHALL JEWELL,

Postmaster-General.

The PRESIDENT.

APPENDIX.

No. 1.—*Estimates for expenditures for the fiscal year ending June* 30, 1876.

FIRST ASSISTANT POSTMASTER-GENERAL.

For compensation to postmasters	$7,000,000 00	
For clerks in post-offices	3,500,000 00	
For payments to letter-carriers	2,100,000 00	
For wrapping-paper	25,000 00	
For wrapping-twine	55,000 00	
For marking and rating stamps	10,000 00	
For letter-balances	10,000 00	
For rent of post-offices	300,000 00	
For fuel	140,000 00	
For light	140,000 00	
For stationery, miscellaneous and incidental items	150,000 00	
Total for First Assistant's Bureau		$13,430,000 00

SECOND ASSISTANT POSTMASTER-GENERAL.

For inland transportation	$18,062,796 00	
For railway postal clerks	1,257,141 00	
For route-agents	1,084,982 00	
For mail-route messengers	160,000 00	
For local agents	115,000 00	
For mail-messengers	715,000 00	
For mail depredations and special agents	175,000 00	
For mail-locks and keys	30,000 00	
For mail-bags and mail-bag catchers	210,000 00	
For preparation and publication of post-route maps	35,000 00	
Total for Second Assistant's Bureau		21,844,919 00

THIRD ASSISTANT POSTMASTER-GENERAL.

For postage-stamps	$149,764 00		
For expenses of agency	6,900 00		
For stamped envelopes and newspaper-wrappers	446,520 00		
For expenses of agency	14,095 00		
For postal cards	159,806 00		
For expenses of agency	5,600 00		
		$782,685 00	
For advertising		115,000 00	
For registered-package envelopes, locks, and seals		65,620 00	
For office envelopes		66,560 00	
For dead-letter envelopes		3,750 00	
For ship, steamboat, and way letters		7,500 00	
For office furniture		35,000 00	
For fees to United States attorneys, marshals, clerks of courts, and counsel necessarily employed by special agents of Post-Office Department, subject to approval by the Attorney-General		7,500 00	
For engraving, printing, and binding drafts and warrants		3,000 00	
For miscellaneous items		2,500 00	
Total for Third Assistant's Bureau			1,089,115 00

SUPERINTENDENT OF FOREIGN MAILS.

For transportation of foreign mails	$300,000 00	
For balances due foreign countries	300,000 00	
Total		$600,000 00
Grand total estimate for expenditures		36,964,034 00
Estimated amount provided by the Department from its own revenue, accruing from postage and other sources		29,148,156 00
Amount to be provided from the general Treasury to make the receipts equal the expenditures, (deficiency)		7,815,878 00
Expenditures under special appropriations to be provided out of the general Treasury:		
For mail-steamship service between San Francisco, Japan, and China	$1,000,000 00	
For mail-steamship service between United States and Brazil	37,500 00	
For mail-steamship service between San Francisco and Sandwich Islands	75,000 00	
Total		1,112,500 00
For official postage-stamps for use during the fiscal year		986,000 00
Total to be provided from general Treasury		9,914,378 00

EDWARD W. BARBER,
Third Assistant Postmaster-General.

POST-OFFICE DEPARTMENT,
APPOINTMENT OFFICE,
Washington, D. C., October 30, 1874.

SIR: Accompanying this I have the honor to submit a statement of the estimated expenditures for the items named during the fiscal year ending June 30, 1876.

The estimate for compensation to postmasters is made at $7,000,000, being an increase of $500,000 over the amount appropriated for the year ending June 30, 1875, or an increase of 7.7 per centum, against 13.53 per centum for said year.

This increase is deemed necessary because the fourth-class offices (a very large class, constantly increasing in number and business) will, under the law of last session, receive their compensation by quarterly adjustments from commissions and box-rents in accordance with the amount of business done, so that the increase will appear in each year's outlay, instead of biennially as under the former law adjusting the salaries for such offices every two years. It is, therefore, apparent that this item of appropriation must increase in proportion as the revenues of the Department increase.

The estimated amount required for the free-delivery service for the fiscal year ending June 30, 1876, is $2,100,000. This sum is rendered necessary by the growth of the service and its probable extension under the act approved June 23, 1874, entitled "An act making appropriations for the service of the Post-Office Department for the fiscal year ending June 30, 1875, and for other purposes," which authorizes the employment of letter-carriers in cities and towns having a population of not less than 30,000 within their corporate limits.

The amount expended for the free-delivery service, including incidental expenses, for the year ended June 30, 1874, as reported by the Auditor for this Department, was $1,802,696.41; and the amount asked for, viz, $2,100,000, is an excess of $297,303.59 over the expenditures of last year, and $200,000 over the appropriation for the year ending June 30, 1875.

This estimate is not considered too large, in view of the probable demands of the service for the year ending June 30, 1876, provided the policy indicated in the general order of the Postmaster-General, of September 22, 1874, is carried out.

The estimate for clerks in post-offices is placed at an increase of $250,000 over the year ending June 30, 1875, being 7.7 per centum against 14.28 per centum of said year, and made necessary by the growth of the service.

The estimate for wrapping-paper shows a decrease of 7.4 per centum, while the amount asked for wrapping-twine shows an increase of 14.6 per centum over the preceding year.

The estimate for marking and canceling stamps, letter-balances, rent, fuel, and light for post-offices, stationery, miscellaneous and incidental expenses, is made necessary by the requirement to provide for the rapid extension of the service.

The total amount asked for is $13,430,000.

Accompanying this communication is a tabular statement, marked A, giving more definite information.

Very respectfully,

J. W. MARSHALL,
First Assistant Postmaster-General.

Hon. E. W. BARBER,
Third Assistant Postmaster-General.

3 P M G

A.—*Comparative statement showing the estimate, the appropriation, and the expenditure for the items named below for the fiscal year ended June* 30, 1874, *with the per centum of increase or decrease of expenditures, with estimates for the same during that period; also the amounts appropriated for the several items for the fiscal year ending June* 30, 1875, *with the per centum of increase or decrease of the same compared with the expenditures of the previous fiscal year, together with the estimates for the same items for the year ending June* 30, 1876, *with the per centum of increase or decrease for the same compared with the appropriation for the fiscal year ending June* 30, 1875.

Items.	Estimate for the fiscal year ended June 30, 1874.	Appropriation for the fiscal year ended June 30, 1874.	Expended during the fiscal year ended June 30, 1874.	Per centum of increase or decrease of expenditures over estimates for 1874.		Appropriation for the fiscal year ending June 30, 1875.	Per centum of increase or decrease over expenditures for the fiscal year ended June 30, 1874.		Estimate for the fiscal year ending June 30, 1876.	Per centum of increase or decrease over appropriation for the fiscal year ending June 30, 1875.	
				Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
For compensation to postmasters	$5,700,000	$5,725,000	$5,818,472 17	2+		$6,500,000	11.7		$7,000,000	7.7	
For clerks in post-offices	3,000,000	2,975,000	3,297,961 77	10—		3,250,000		1.4	3,500,000	7.7	
For payments to letter-carriers	1,600,000	1,700,000	1,802,418 68	12.7		1,900,000	5.4		2,100,000	10.5	
For wrapping-paper	33,000	33,000	20,200 00		38.7	27,000	33.6		25,000		7.4
For twine	38,000	38,000	49,574 50	30.4		48,000		3.2	55,000	14.6	
For marking and canceling stamps	12,000	12,000	7,953 54		33.7	9,000	13.2		10,000	11.1	
For letter-balances	3,000	3,000	4,749 90	58.3		3,000		36.8	10,000	233⅓	
For rent for post-offices*	300,000	300,000									
For fuel for post-offices*	130,000	130,000									
For lights for post-offices*	160,000	160,000	515,270 94		20.7	720,000	39.7		730,000	1.4	
For stationery and miscellaneous items*	60,000	60,000									
Total	11,036,000	11,136,000	11,516,601 50	4.35		12,457,000	8.15		13,430,000	7.8	

* Paid as one item.

APPOINTMENT-OFFICE, *Post-Office Department, October* 30, 1874.

POST-OFFICE DEPARTMENT,
OFFICE OF THE SECOND ASSISTANT POSTMASTER-GENERAL,
Washington, D. C., October 5, 1874.

DEAR SIR: I beg leave to submit herewith estimates of the amounts of money which it will be necessary to appropriate for inland mail transportation and items incident thereto for the fiscal year ending June 30, 1876.

The amounts are stated in tabular form, in comparison with the cost of the service at the end of each of the fiscal years 1872, 1873, and 1874, the latter including an estimate of the additional expense which the re-adjustment of the pay on railroad routes required by act of March 3, 1873, will occasion on routes from which the necessary returns were not received up to the close of the year, with the appropriation for 1875, and with an estimate of the expense for 1875, which, for inland transportation, on the basis of 7 per cent. increase on the cost for 1874, will exceed the amount appropriated by the sum of $640,374. The increase of the cost of inland transportation for 1873 over 1872 appears by the table to be 8.45 per cent.; and for 1874 over 1873, 16.79 per cent. This disproportionate increase for that single year, 1874, results from the re-adjustment, made and to be made, of the rates of pay on railroad routes under the act of March 3, 1873, the increase on railroad routes amounting to 25.57 per cent. over the cost for 1873, while the increase on other land-routes is only 7.07 per cent. over the cost for 1873. The appropriation for 1874 contained an allowance of $500,000, specifically, for the increase which the re-adjustment would occasion. As, however, the regular appropriation for "inland transportation" included an allowance for the usual increase of expense caused by the re-adjustment of pay on railroad-routes made for several years prior to the passage of the act of March 3, 1873, and the increase for 1872 amounted to $354,865.94, the increase for 1873, if the re-adjustment on routes in the New York and New England section for the contract-term commencing on the first of July of that year had not been postponed to await the receipt of the new returns required by the act of March 3, 1873, would have amounted, at the rate of advance in the cost of inland transportation for the same period, namely, 8½ per cent., to $385,029.54. The appropriation for "inland transportation" for 1874, apart from the half million provided expressly for the re-adjustment under the act of March 3, 1873, was at the rate of 8⅝ per cent. advance on the cost for 1873; and, adding this rate to the $385,029.54, to which the usual increase by re-adjustment for that year would have amounted, the usual increase for 1874 may be set down at $419,040.48. Adding this to the $500,000 specifically provided by the act of March 3, 1873, the whole amount applicable to the increase by re-adjustment, both specific and usual, for 1874, may be stated at $919,040.48; but this sum falls short by $679,308.52 of the amount necessary, as the increase caused by the re-adjustment which the act requires will amount to $1,598,349, the weights of the mails taken subsequently to June 30, 1873, as the basis for the re-adjustment, being largely in excess of any weights previously taken, and thus swelling the increase far beyond the estimates, which were cast upon the previous weights. The cost for 1875, allowing therefor an increase of 7 per cent. on the cost for 1874, will amount to $17,040,374. The estimate for 1876 is $18,062,796, being cast upon an allowance of only 6 per cent. increase on the estimated cost for 1875. This is 2.45 per cent. less than the increase for 1873 over 1872, and 1 per cent. less than the estimated cost for 1875 over that for 1874. The increase for 1874 over 1873 was exceptionally large, for the reason above stated.

The increase of expense for railway post-office clerks in 1873 over

1872 was 14.53 per cent.; for 1874 over 1873, 12.40 per cent.; and for 1875, as estimated, over 1874, 10 per cent. The estimate for 1876 is only 8 per cent. over the cost for 1875.

The increase of expense for route-agents in 1873 over 1872 was 12.25 per cent.; for 1874 over 1873, 8.96 per cent.; for 1875, as estimated, over 1874, 10 per cent. The estimate for 1876, $1,084,982, is 10 per cent. over that for 1875. On this item, the expense for 1875, as estimated, is $986,348, against an appropriation of only $929,035, leaving a deficiency of $57,313.

On the items for mail-route messengers, local agents, and mail-messengers, the estimates for 1876 amount to $990,000, an increase of 5.98 per cent. over the estimated cost for 1875, which is $934,070, and of 8.32 per cent. over the appropriation for 1875, which, being only $913,916, is $20,154 less than the estimated cost.

Compared with the actual cost for these three items for 1874, which was $827,022, the estimate for 1876 is an increase of 19.70 per cent., which is less than an average of 10 per cent. for each of the years 1875 and 1876, against an increase of 28.01 per cent. for 1874 over 1872, of 13.90 per cent. for 1874 over 1873, and of 12.38 per cent. for 1873 over 1872.

The estimate for mail-depredations and special agents for 1876 is $175,000. This is $15,000 more than the appropriation for 1875; but that appropriation is insufficient to maintain the present force, of which a reduction will consequently be necessary, to the damage of the service, as it is feared, in view of its rapid expansion and the increased supervision of every branch required on that account.

For mail-locks and keys, the estimate for 1876 is placed at $30,000. This is $20,000 less than the amount appropriated for the current year; but such a reduction is deemed practicable because the entire service will have been fully equipped by the close of this year with new locks and keys, so that it will then only be necessary to provide for wear and tear and for the natural growth of the service.

An appropriation of $200,000 for mail-bags and mail-catchers was asked for last year. The amount appropriated, however, was only $180,000. The cost for 1874 was $201,178.64. The estimate for 1876 is $210,000, which amount, in view of the continual extensions and improvements of the mail-service, especially on railroad-routes, is deemed indispensable.

An appropriation of $35,000 was asked for last year for the preparation and publication of post-route maps, that amount being intended to cover the additional expense necessary for the reproduction by photo-lithography of manuscript maps of the new States and Territories. The sum appropriated was only $30,000; but the estimate for 1876 is placed again at $35,000, $5,000 of the amount being intended for the purpose above indicated, the accomplishment of which is deemed to be of such importance as fully to justify the small expenditure involved.

The aggregate amount of the estimates for all of the above-mentioned items for 1876 is $21,844,919, against $19,982,965 appropriated for 1875, an average increase of 9.31 per cent. This is 1.93 per cent. above the average increase of the estimates for 1875 over the appropriation for 1874; but this again results from the unexpectedly large increase caused by the re-adjustment of pay on railroad routes under the act of March 3, 1873.

Very respectfully,

JOHN L. ROUTT,
Second Assistant Postmaster-General.

HON. MARSHALL JEWELL,
Postmaster-General.

estimate of the amounts necessary to be appropriated for the years 1872, 1873, and 1874, with the appropriation and estimated cost for 1875, and for mail-depredations and special agents, mail-locks and keys, mail-bags and mail-bag catchers, and the preparation and publication of post-route maps.

Object.	Cost for 1872.	Cost for 1873.	Increase per cent. for 1873 over 1872.	Cost for 1874.	Increase per cent. for 1874 over 1873.	Appropriation for 1875.	Increase per cent. of appropriation for 1875 over cost for 1874.	Estimated cost for 1875.	Increase per cent. over cost for 1874.	Estimate for 1876.	Increase per cent. for 1876 over estimated cost for 1875.
Inland transportation	$12,572,264 00	$13,635,341 00	8.45	*$15,925,584 00	16.79	$16,400,000	2.97	$17,040,374	7	$18,062,796	6
Railway post-office clerks	821,600 00	941,000 00	14.53	1,058,200 00	12.45	1,320,014	24.74	1,164,020	10	1,257,141	8
Route-agents	737,820 00	822,240 00	12.25	896,680 00	8.26	929,035	3.6	986,348	10	1,084,982	10
Mail-route messengers	89,910 00	106,740 00	18.71	136,540 00	27.92	160,000	17.18	163,848	20	160,000	†2.34
Local agents	69,216 00	82,896 00	19.76	94,710 00	15.45	110,383	16.54	108,916	14.99	115,000	5.58
Mail-messengers	486,922 00	536,441 00	10.16	595,772 00	11.06	643,533	8.01	661,306	10.99	715,000	8.06
Mail-depredations and special agents	.....	.....	.....	.....	.....	160,000	.....	.....	.....	175,000	.....
Mail-locks and keys	28,169 07	38,377 30	.....	39,425 50	.....	50,000	.....	.....	.....	30,000	.....
Mail-bags and mail-bag catchers	191,174 00	170,227 20	.....	201,178 64	.....	180,000	.....	.....	.....	210,000	.....
Preparation and publication of post-route maps	.....	.....	.....	.....	.....	30,000	.....	.....	.....	35,000	.....
	.....	.....	.....	.....	.....	19,982,965	.....	.....	.....	21,844,919	.....

* This includes $523,527 estimated to be necessary to complete the re-adjustment of pay on railroad-routes under act of March 3, 1873. † Decrease.

JOHN L. ROUTT,
Second Assistant Postmaster-General.

OCTOBER 5, 1874.

POST-OFFICE DEPARTMENT,
OFFICE OF THIRD ASSISTANT POSTMASTER-GENERAL,
Washington, D. C., October 25, 1874.

SIR: I have the honor to submit herewith tables showing—

1. Estimate of the expenditures and revenue of the Post-Office Department for the fiscal year ending June 30, 1876.

2. Detailed statement of payments charged by the Auditor of the Treasury for the Post-Office Department to miscellaneous account.

3. Estimate of indebtedness of the Post-Office Department for the last and previous fiscal years not yet adjusted.

4. Receipts and expenditures during the fiscal year ended June 30, 1874, compared with the years 1872–'73 and 1871–'72.

5. Receipts and disbursements at Treasury depositories on account of the Post-Office Department.

6. Receipts and disbursements at depository post-offices on account of the Post-Office Department.

7 and 8. Number and value of postage-stamps, stamped envelopes, and newspaper-wrappers issued during the fiscal year ended June 30, 1874.

9. Number and value of official postage-stamps, stamped envelopes, and newspaper-wrappers furnished the several Executive Departments during the fiscal year ended June 30, 1874.

10. Statement showing increase in issues of postage-stamps, stamped envelopes, and newspaper-wrappers, exclusive of official postage-stamps, stamped envelopes, and wrappers, during the fiscal year ended June 30, 1874.

11. Statement showing increase in issues of postage-stamps, stamped envelopes, and newspaper-wrappers, including official postage-stamps, stamped envelopes, and wrappers, during the fiscal year ended June 30, 1874.

12. Number and value (actual or nominal) of dead-letters received and disposed of during the fiscal year ended June 30, 1874.

13. Comparative statement showing the operations of the Dead-Letter Division during the five fiscal years commencing July 1, 1869, and ending June 30, 1874.

EXPLANATION OF ESTIMATES.

As the reports of the First and Second Assistant Postmasters-General set forth the necessities for the sums required by those Bureaus, I respectfully invite your attention to the following detailed statement concerning the appropriations asked for by this Office:

ADHESIVE POSTAGE-STAMPS.

The number of ordinary postage-stamps issued during the fiscal year ended June 30, 1874, was	632,733,42[illegible]
Add 10 per cent., being about the average yearly rate of increase	63,273,342
Gives estimated issue of ordinary stamps for fiscal year ending June 30, 1875	696,006,762
Add 10 per cent. increase, as before	69,600,67[illegible]
Gives estimated issue of ordinary stamps for fiscal year ending June 30, 1876	765,607,43[illegible]

Cost of manufacturing that number at present contract-price, 14.99 cents per thousand	$114,764
Add estimated cost of manufacturing official stamps, and also of manufacturing the newspaper and periodical stamps required by act of Congress approved June 23, 1874	35,000
Gives estimated total cost of manufacturing adhesive postage-stamps during fiscal year ending June 30, 1876	149,764

In the above estimate the issues of ordinary stamps for the year ended June 30, 1874, and the average rate of increase per year, are taken as a thoroughly safe basis of calculation. For the official stamps and the newspaper and periodical stamps, the estimate is based upon the best information obtainable. The contracts for manufacturing the ordinary and official stamps expire in 1877.

POSTAGE-STAMP AGENCY.

Salaries of distributing agent and assistants	$5,900
Incidental expenses of agency	1,000
Total	6,900

The number of persons employed at this agency since the transfer of the manufacture of stamped envelopes, &c., to Hartford, Conn., is four, viz, an agent, whose salary is $2,500 per annum, and three clerks, whose salaries are $1,800, $1,600, and $1,400, respectively. It is believed, however, that the necessary work can be performed with two clerks, and appropriation is asked for accordingly.

The incidental expenses consist of the necessary expenses of the agent when required to visit the Department, or while absent from New York in making any investigation ordered by this Office; also the expenses of other agents directed to make investigations connected with the issue of postage-stamps.

ORDINARY AND OFFICIAL STAMPED ENVELOPES AND WRAPPERS.

The cost of stamped envelopes and newspaper-wrappers, both ordinary and official, issued during the year ended June 30, 1874, at present contract-prices, was	$343,583 28
Add 14 per cent., rate of increase over previous year	48,101 66
Gives estimated cost for year ending June 30, 1875	391,684 94
Add 14 per cent. increase as before	54,835 06
Gives estimated cost of manufacture for the year ending June 30, 1876	446,520 00

The contract under which the ordinary and official stamped envelopes and wrappers are being furnished is for four years, and will not expire until September 30, 1878. The prices for their manufacture will therefore remain unchanged. The estimated aggregate cost is based upon the cost, at present contract-prices, of the issues during the last fiscal year, adding thereto the ratio of increase of that over the preceding year.

STAMPED-ENVELOPE AGENCY.

Salaries of agent and assistants	$13,095
Incidental expenses of agency	1,000
Total	14,095

The number of persons employed at present at this agency is nine, viz: a special agent in charge, whose salary is $1,600 per annum and $3 per day; one clerk at $1,800, and two clerks at $1,200 each, employed in distribution; one clerk at $1,800, and three clerks at $1,200 each, employed in the registration of packages; and one laborer at $800. This force is thought to be sufficient for the probable requirements of the service during the year 1875–'76.

The incidental expenses of this agency, situated in Hartford, Conn., where the envelopes are manufactured, are of the same character as those of the postage-stamp agency at New York.

POSTAL CARDS.

The period since the introduction of postal cards, on the 1st of May, 1873, has been too short to allow of a yearly comparison of issues. It is probable, however, that there will be an average increase per year of at least 12 per cent.; and it is upon this assumption that the following estimate is made, taking as a basis the issues for the year 1873–'74:

Number of postal cards issued during the fiscal year ended June 30, 1874	91,079,000
Add 12 per cent. for increase	10,929,480
Gives estimated issue for the year ending June 30, 1875	102,008,480
Add 12 per cent. increase, as before	12,241,015
Gives estimated issue for the year ending June 30, 1876	114,249,495
Cost of manufacturing that number, at present contract-prices, $1.39½ per thousand	$159,806 00

The present contract does not expire until April 30, 1877.

POSTAL-CARD AGENCY.

Salaries of agent and assistants	$4,600
Incidental expenses of agency	1,000
Total	5,600

At present there are employed at Springfield, Mass., in connection with the inspection and distribution of postal cards, an agent at a salary of $2,000 per annum, and two clerks, one at $1,400 and the other at $1,200 per annum. This force is considered sufficient for the prospective increase of business.

The remarks under the head of "Postage-stamp agency," as to incidental expenses, will apply also to the appropriation required for that purpose for the use of the postal-card agency.

ADVERTISING.

This appropriation covers the payments for advertisements for proposals for carrying the mails and for furnishing supplies of all kinds, as well as the advertisement of unclaimed letters at post-offices, and such other miscellaneous advertising as may be required.

The following sums have been expended:

During the fiscal year ended June 30, 1869	$79,565 41
During the fiscal year ended June 30, 1870	66,571 [illegible]
During the fiscal year ended June 30, 1871	57,459 [illegible]
During the fiscal year ended June 30, 1872	53,112 [illegible]
During the fiscal year ended June 30, 1873	81,412 [illegible]
During the fiscal year ended June 30, 1874	109,740 [illegible]
Amount appropriated for fiscal year ending June 30, 1875	60,000 [illegible]

During the fiscal year ending June 30, 1876, advertisements inviting proposals for carrying the mails in fourteen States will have to be published, as well as all the general advertising of the Department and post-offices. It is therefore estimated that there will be required for this purpose for the next fiscal year the sum of $115,000.

The appropriation for the current fiscal year is $15,000 less than the estimate submitted therefor by this Bureau. (See page 11, appendix, Postmaster-General's Report, year ended June 30, 1873.) It is believed that the sum appropriated will not be sufficient to pay for all the advertising required by law during the year, and that an additional appropriation to supply the deficiency will be necessary.

REGISTERED-PACKAGE ENVELOPES, LOCKS, AND SEALS.

It is estimated that there will be required for this purpose during the fiscal year ending June 30, 1876, the sum of $65,620.

The appropriations under this head for previous years furnish only a slight basis for estimating the amount which will doubtless be required for the ensuing fiscal year. During the past year the number of registered-package envelopes issued exceeded the anticipations of the Department, showing conclusively that the growth of this branch of the service, under proper care, can hardly be overestimated.

POST-OFFICE ENVELOPES.

Number of post-office envelopes issued during the fiscal year ended June 30, 1874	19,632,810
Add 31 per cent., rate of increase over preceding year	6,086,171
Gives estimated issue for year ending June 30, 1875	25,718,981
Add 31 per cent., increase as before	7,972,884
Gives estimated issue for year ending June 30, 1876	33,691,865
Cost of manufacturing that number at present contract prices	$66,560

These envelopes are required principally for the business of the registered-letter and money-order systems, the increasing popularity of both of which will explain the large increase of issues. The contract from which the prices are taken will expire June 30, 1875, but it is not believed that the envelopes can be thereafter obtained at any cheaper rates.

DEAD-LETTER ENVELOPES.

The number of envelopes used in returning dead letters to writers during the fiscal year ended June 30, 1874, was	1,907,000
Add 10 per cent. for increase	190,700
Gives estimated number required for 1874–'75	2,097,700
Add 10 per cent., as before	209,700
Gives estimated number required for fiscal year ending June 30, 1876	2,307,400
The cost of which at present contract price will be	$3,750

The increase in the number of dead letters returned to writers during the last fiscal year over the preceding year was only 19,095, or a trifle over 1 per cent. This being very much smaller than the usual increase, (about 17½ per cent.,) it has been thought safe to assume an increase of 10 per cent. for the fiscal years ending June 30, 1875 and 1876.

The cost is calculated upon present contract price, as, although this contract will expire June 30, 1875, the rate now paid is so reasonable that no reduction therefrom is anticipated.

SHIP, STEAMBOAT, AND WAY LETTERS.

This appropriation is required under sections 166, 222, 223, and 224 of the act of June 8, 1872, to pay the masters or owners of vessels not regularly engaged in carrying the United States mails for letters brought in their vessels and delivered to the post-offices at ports of arrival, and from thence transmitted to destination in the mails.

The amounts so paid are added to the regular rates of postage, and are paid by the parties addressed on delivery of the letters, and thus are repaid to the Department.

No reliable data can be furnished on which to base an estimate of the amount required for this purpose during any future fiscal year. The payments during several years past have been:

During the fiscal year ended June 30, 1869	$8,076 35
During the fiscal year ended June 30, 1870	9,247 39
During the fiscal year ended June 30, 1871	10,716 45
During the fiscal year ended June 30, 1872	7,011 05
During the fiscal year ended June 30, 1873	4,259 96
During the fiscal year ended June 30, 1874	4,18[illegible] 42
The amount appropriated for 1874–'75 is	7,500 00

In view of the irregularity of expenditure thus shown, I have estimated the amount required for the fiscal year ending June 30, 1876, at $7,500.

OFFICE FURNITURE.

This appropriation is necessary for the purpose of supplying post-offices with articles of furniture actually needed, and for renewing and repairing the same. It is impossible to furnish reliable data on which to base the estimate of the amount which will be required for this purpose during the next fiscal year, as the wants of post-offices cannot be determined so far in advance.

There have been expended during previous years the following sums:

During the fiscal year ended June 30, 1869	$2,284 65
During the fiscal year ended June 30, 1870	2,198 37
During the fiscal year ended June 30, 1871	3,211 51
During the fiscal year ended June 30, 1872	6,535 5[illegible]
During the fiscal year ended June 30, 1873	6,36[illegible] 5[illegible]
During the fiscal year ended June 30, 1874	32,711 9[illegible]
Amount appropriated for fiscal year ending June 30, 1875	6,500 00

The apparently large increase shown in the expenditures during the fiscal year 1873–'74 is explained by a statement of the fact that formerly this item embraced only the allowances made for the purchase of plain desks or cases, at the smaller offices, for the safe-keeping of letters; but during the last fiscal year the Auditor of the Treasury for this Department charged against this appropriation the amounts expended for furniture purchased at all offices, together with repairs to the same, which had previously been charged to "miscellaneous and incidental expenses of offices."

Owing to this change it is estimated that there will be needed during the fiscal year 1875–'76, for this purpose, $35,000.

In this connection I wish to call your attention to the fact that although this Bureau is charged with the duty of making estimates for this purpose, no part of the expenditure comes within its control.

FEES TO UNITED STATES ATTORNEYS, MARSHALS, CLERKS OF UNITED STATES COURTS, ETC.

This appropriation is used to pay the fees allowed for the proper prosecution of suits against postmasters and others. The amount required varies each year according to the exigencies of the service. Former payments have been—

During the fiscal year ended June 30, 1869	$6,758 74
During the fiscal year ended June 30, 1870	8,965 10
During the fiscal year ended June 30, 1871	6,431 55
During the fiscal year ended June 30, 1872	5,141 76
During the fiscal year ended June 30, 1873	6,480 76
During the fiscal year ended June 30, 1874	4,648 71
Amount appropriated for 1874–'75	7,500 00
Amount estimated as required for 1875–'76	7,500 00

ENGRAVING, PRINTING, AND BINDING DRAFTS AND WARRANTS.

This appropriation covers the expense of furnishing drafts and warrants for the payment of all debts due by the Post-Office Department, and for collecting the balances due by postmasters to the United States. The work is not done by the Congressional Printer, as the plates are of steel, but by the Bureau of Engraving and Printing of the Treasury Department.

There was expended during the fiscal year ended June 30, 1874	$1,180 30
And there was appropriated for the fiscal year ending June 30, 1875	3,000 00
The same sum, as appropriated for the current year, is estimated as required for the next fiscal year, viz	3,000 00

MISCELLANEOUS.

Under this head are charged all items of necessary expense that cannot be included in any regular appropriation. These expenses vary from year to year, as emergencies arise, and it is impossible to fix precisely the sum required.

There was appropriated for this purpose, for the current fiscal year, the sum of $2,500, and the same sum is asked for the year ending June 30, 1876.

SUMMARY OF ESTIMATES.

The following table shows the amounts estimated to be required by this Bureau for the service of the fiscal year 1875–'76, as compared with the appropriations for 1874–'75:

Classification of items.	Estimated as required for 1875–'76.	Appropriated for 1874–'75.
Adhesive postage-stamps	$149,764	$118,667
Postage-stamp agency	6,900	10,200
Stamped envelopes and wrappers	446,520	535,424
Stamped-envelope agency	14,095	.....
Postal cards	159,806	168,270
Postal-card agency	5,600	5,600
Advertising	115,000	80,000
Registered-package envelopes, &c	65,620	42,680
Post-office envelopes	66,560	60,000
Dead-letter envelopes	3,750	4,585
Ship, steamboat, and way letters	7,500	7,500
Office-furniture	35,000	6,500
Fees to United States attorneys, &c	7,500	7,500
Drafts and warrants	3,000	3,000
Miscellaneous	2,500	2,500
	1,089,115	1,052,426

This table shows an increase of $36,689 in the amount estimated as required for 1875–'76 over the appropriations for 1874–'75, or about 3½ per cent. The sums asked for have been made as small as was deemed consistent with the interests of the service, and it is believed that no reduction can safely be made.

OPERATIONS OF THE BUREAU.

The following detailed statement shows the operations of the various divisions of this Bureau during the past fiscal year, and sets forth the necessity for increased clerical force consequent upon the growth of the postal service:

DIVISION OF FINANCE.

The work of this division is so diversified that without great elaboration much of it cannot be made to appear in any report.

During the last fiscal year 3,280 contracts for mail-service were received from the Second Assistant Postmaster-General, and the data necessary for correct payments to mail-contractors entered upon the books of this division; 5,776 orders of the Postmaster-General, recognizing mail-service not under contract, curtailing or extending mail-service, or modifying previous orders, were received, examined to insure the accuracy thereof, and entered upon the books in like manner; 28,000 reports in settlement of accounts (for pay of mail-contractors, special, blank, stamp, postal-card, and mail-lock agents) were received from the Auditor of the Treasury for this Department, examined, the calculations verified by the data already recorded, the amounts paid, and the dates of passing the reports entered.

Accounts were kept with 33 Treasury depositories, involving the receipt and disbursement of $12,600,000. Against this sum 10,649 warrants were drawn, registered, and posted to the proper accounts. These warrants were mailed to the payees, each accompanied by a receipt, which, when signed and returned, was properly entered upon the books of the division, in order to show the delivery of the warrants. (For a detailed statement in regard to this, see Table No. 5, attached to this report.)

There were also kept accounts with 179 post-office depositories, amounting to $4,177,589.65, of which $3,224,415.38 arose from the proceeds of the depositories themselves, $85,899.17 from collection-drafts, and $867,275.10 from deposits by other post-offices. For this last-mentioned sum 7,526 certificates of deposit were received and entered. Against the aggregate accumulation in these depositories, 17,909 drafts were issued and posted to the credit of postmasters. In addition to the amount paid out by draft, the sum of $1,323,319.69 was paid to route-agents, railway post-office clerks, mail-messengers, and letter-carriers, by various offices. The accounts of these offices were submitted monthly, compared with the books of this division, and, if found correct, checked off and filed for future reference; if incorrect, they were returned, accompanied by letters pointing out errors and directing the manner of correction.

The books of this division are balanced weekly, to facilitate payments to creditors of the Department.

During the year the Auditor forwarded to this Bureau 531 statements of accounts with postmasters, which were promptly transmitted to those officials, together with letters of advice and instructions regarding the same.

Upon the deposit-desk of this division a record of 4,527 depositing-offices was kept, showing that 11,600 certificates of deposit were received and entered; 8,880 circulars of instruction were sent to postmasters; 1,428 Auditor's statements of account were sent out; and 661 letters from postmasters relative to balances due were received and noted upon the books.

The duties of this division are not only arduous, but of the highest importance to the Department. They are performed promptly and well; and, believing that the clerks engaged in their performance should receive higher compensation than is now allowed, I have, in my estimate for the clerical force required by this Bureau during the next fiscal year, applied for higher-grade clerkships for most of these gentlemen.

DIVISION OF POSTAGE-STAMPS, STAMPED ENVELOPES, AND POSTAL CARDS.

The number of adhesive postage-stamps issued to postmasters for sale to the public during the year was 632,733,420, valued at $17,275,242; of ordinary stamped envelopes, "plain," 65,107,500, valued at $1,927,952.30; of stamped envelopes bearing a "return request," 51,940,250, valued at $1,733,738.40; of ordinary newspaper-wrappers, 19,370,750, valued at $220,502.06; of postal cards, 91,079,000, valued at $910,790; of official postage-stamps issued to Executive Departments for official use, (including those distributed prior to July 1, 1873,) 32,320,085, valued at $1,415,845.20; and of official stamped envelopes and wrappers, 12,900,300, valued at $353,456.66; making a total number of 905,451,305, and a total value of $23,837,526.62. The increase in the value of ordinary issues over the preceding year was $1,668,448.76, or 8.17 per cent. The increase, including the issues for official use, was $3,437,750.62, or 16.85 per cent.

In calculating the value of both ordinary and official stamped envelopes, &c., the gross value, or the cost of manufacture added to the postage-value, is taken.

There were also issued within the year 2,922,000 registered-package envelopes, 9,129,510 post-office envelopes, and 2,809,800 dead-letter envelopes; total, 14,861,310.

The total number of requisitions filled was 278,296, as follows: For ordinary postage-stamps, 86,218; for official postage-stamps, 39,268; for ordinary stamped envelopes and wrappers, "plain," 39,060; for "special-request" stamped envelopes, 28,437, (embracing 45,015 different "requests;") for official stamped envelopes, &c., 1,544; for postal cards, 23,634; for registered-package envelopes, 30,360; and for post-office envelopes, 29,775.

The number of packages of ordinary postage-stamps forwarded was 87,613; of official postage-stamps, 42,086; of ordinary stamped envelopes and wrappers, "plain," 52,146; of "special-request" envelopes, 40,091; of official stamped envelopes, &c., 2,458; of postal cards, 25,715; of registered-package envelopes, 32,400; and of post-office envelopes, 35,853; total, 318,362.

The losses in the mails during the year amounted to $183.15, and consisted of two packages of postage-stamps valued at $175, and one package of stamped envelopes valued at $8.15. This is the lowest number of packages ever lost in any one year.

During the past year the labor of this division has been largely increased by reason of the introduction of postal cards and official stamps and envelopes, as well as by the natural increase in the issues of ordi-

nary stamps and envelopes. A further augmentation is to be expected from the inauguration of the system of compulsory prepayment of postage on newspapers and periodicals by means of postage-stamps specially prepared and issued for that purpose, which system, under the act of Congress approved June 23, 1874, will go into effect on January 1, 1875.

The clerical force of the division proper (excluding the agencies) numbers 29, and the additional duties already imposed have been performed only by the most extraordinary effort. The necessity for additional clerks, as asked for in the estimate for the next fiscal year, will be apparent on consideration of the facts above recited; and unless this increase be granted it will be impossible to properly perform all the work required.

DIVISION OF REGISTERED LETTERS.

In my last annual report I devoted considerable space to a detail of the needs of this division, consequent upon the growth and importance of the registered-letter branch of the postal service. Therein I recommended an increase of clerical force, in order that the business of the division might be properly attended to, and adverted to a proposed change in the method of transmitting registered letters, by which greater security and celerity could be obtained.

During the past year the increase in the issue of registered-package envelopes to postmasters upon their requisitions therefor has been more than 30 per cent. over the issues of the previous fiscal year. Part of this increase is doubtless owing to the reduction of the fee for registering domestic letters from fifteen to eight cents, which took effect January 1, 1874; but much is due to the greater attention which, with the limited facilities at its command, the Department has endeavored to give the system, and which has augmented public confidence therein.

The proposed change in the mode of transmitting this class of letters, as indicated in my report, has, however, not yet been made, it being deemed inexpedient to put the new scheme into operation until proper legislation to carry it into entire effect was obtained from Congress.

Recognizing the importance of the registered-letter system to the public, and the necessity of giving to its workings more attention than could be given with the force at the disposal of the Department, and also the demand for such enactments as would more nearly attain absolute security in the transmission of registered matter by imposing a more rigid responsibility upon the officials of the Department through whose hands it might pass, the Postmaster-General, on the 27th of May of this year, addressed a letter to the chairman of the Committee on the Post-Office and Post-Roads of the House of Representatives, setting forth the facts, and recommending such immediate legislation as would, in his judgment, enable the Department to meet the wants of the public and increase the efficiency and security of the system. A bill for this purpose was offered in the House of Representatives, and referred to the Post-Office Committee, but, owing to the near termination of the session, no action was taken thereon, and it remains still pending.

The reasons assigned by the Postmaster-General, in the letter referred to, for the increase of the clerical force of this division, exist in still greater force at this time. The use of the system by the public, judged by the issue of registered-package envelopes to postmasters upon their requisitions, (which is the only means at command for ascertaining that use,) is constantly increasing. Although reports of this business from the offices throughout the country have been received each quarter during the past fiscal year, they still remain unclassified and unrecorded

from want of the necessary force to perform the work. I have, therefore, in preparing the estimate of clerks necessary for the proper working of this Bureau, included, for this division, the number asked for in the bill now pending, and even that number will scarcely be sufficient to perform thoroughly and promptly all the work which should properly be done.

The registration of letters is an important feature of the postal system in every country. In England, France, and Germany this branch of the service is largely used by the people, and is considered satisfactory in its workings. In England the number of letters so transmitted is not only very large, and in about the same proportion to ordinary letters as in this country, but the losses have, under careful management and the imposition of strict responsibility, dwindled down to nearly nothing. In Canada, while the number transmitted is not so great as in this country, the relative proportion to ordinary letters is much larger, and the losses steadily decrease year by year. In this country, the report of the Chief of Division of Mail Depredations for the last fiscal year shows that, notwithstanding the great increase of the number of letters registered, the losses were less than during the previous year, and are estimated as only twenty-eight thousandths of one per cent. of the whole number transmitted. If such a showing can be exhibited with the present facilities for conducting the operations of the system, it is fair to suppose that better results can be obtained with proper legislation and a remodeling of the system to attain greater celerity and security with fewer handlings of letters and a less divided responsibility of officials. There is every reason to believe that such congressional action as is desired would materially enhance the value of the system to the public, and result in increased usefulness for it.

I desire also to renew my recommendation that every post-office throughout the United States be furnished with a postmarking and canceling stamp, as an additional measure of protection from loss in transmitting registered letters. The importance of this was fully set forth in my last annual report; and, in connection with another subject, will be referred to at the close of this report.

DIVISION OF DEAD-LETTERS.

The operations of this division during the last fiscal year may be epitomized as follows: Number of domestic letters received, 4,348,473; number of foreign letters received, 253,300—total, 4,601,773, representing an actual or nominal value of $4,637,429.08, exclusive of jewelry and other property, which class of inclosures is treated as possessing no money-value that can with correctness be determined. Of the total number of letters received, 1,392,224, representing $3,909,868.46, were delivered to the owners or writers, including 225,893 foreign letters which were returned unopened to the countries whence they came; 24,863, representing $240,183.62, which, from various causes, could not be returned to the writers or owners, were filed for reclamation; and 561,767, representing $487,377, were, at the close of the fiscal year, either on hand not acted upon, or outstanding in the hands of postmasters for delivery; 2,622,619, which were either worthless, (containing circulars, &c.,) or could not be delivered, were destroyed. Of this last number 314,700 had once been sent out for delivery, and, remaining unclaimed at the expiration of the proper time, had been returned.

During the year 6,420 applications were received from persons desirous of recovering supposed dead-letters. In 2,140 of these cases search was successful, and the letters were forwarded to the applicants or owners.

The amount received from unclaimed dead letters and deposited in the Treasury was $8,721, and the money-value of stamps received for postage due on letters was $1,612.45. The postage reclaimed on foreign letters returned to other countries was $1,476.54, and that reclaimed on letters received from foreign countries amounted to $330.58.

Soldiers' and sailors' letters, to the number of 945, were, as by law permitted, forwarded to destination, the postage due thereon to be paid at the office or station of delivery.

This division is, by the nature of its duties, brought into close contact with the people of the United States, as well as the postal authorities of all countries with which this Government has postal treaties. With such wide-spread business relations, it is imperative that its dealings should be prompt and exact. I am glad to be able to state that a gratifying improvement in the management and execution of the duties devolving upon it has taken place during the past year.

DIVISION OF FILES, RECORDS, AND MAILS.

During the past year this division was separated from the division of finance and placed in charge of a competent clerk, who, with two assistants, has performed a great amount of labor.

Over 650,000 communications were received, opened, classified, and referred to the proper divisions. Every letter received was indexed, and, after proper action being taken thereon, returned to the files, note of such action being recorded on the books of this division, and all letters sent out from the Bureau were copied (both in press and permanent form) and recorded.

GENERAL REMARKS.

At the last session of Congress the subject of postage on newspapers and periodicals was taken into consideration by that body, resulting in the passage of a bill compelling prepayment of postage, and fixing the rate at two cents per pound on all of that class of matter published once a week, or more frequently, and transmitted to regular subscribers through the mails, and three cents per pound on such matter issued less frequently than once a week. The provisions of this law are to go into effect January 1, 1875.

The Postmaster-General being by the law confined to a choice of one of three modes of collecting that postage by means of stamps, considerable attention has been given to the matter by this Office. After a careful review of the plans proposed, it was deemed best to recommend the adoption of the system of prepayment by postage-stamps "affixed to a memorandum of mailing," or, in other words, to a stub in a book retained by the postmaster at the mailing-office; a receipt, showing the weight of matter and the amount paid, being given by the postmaster to the person mailing the same; the stamps affixed to the stub to be canceled by a cutting-punch, thus preventing their re-use. This plan, it is believed, is more practicable and less expensive in its operations than either of the others, while, at the same time, it will be quite as effectual in collecting the postage.

The Postmaster-General having approved the recommendations of this Office, a series of stamps has been devised of twenty-four denominations, by means of which any sum which is a multiple of either the two or three cent rate, from two cents to seventy-two dollars, can be made by the use of not more than five stamps.

It is expected that notwithstanding the reduction of rates by the law, the system of compulsory prepayment of newspaper-postage will yield a larger revenue to the Department than has ever been collected. In the city of New York alone a comprehensive inquiry seems to warrant the belief that not less than $600,000 per annum will be paid, a sum which is little less than one-half of the entire revenue from newspaper-postage throughout the United States during the fiscal year just closed. It is, however, impossible to estimate the actual increase for the whole country, owing to that provision of the law which allows the free-mail circulation of newspapers in the counties in which they are printed.

Almost immediately after assuming charge of this Bureau my attention was called to the number of reports from postmasters and special agents of the Department concerning letters on which postage was attempted to be paid by means of previously-used stamps. Careful investigation into the matter leads to the conclusion that a large number of postage-stamps after being once properly used are detached from letters, and, the canceling-marks being removed therefrom, used again in payment of postage.

This proportion will, I believe, probably reach five per cent. of the value of all the stamps sold each year, causing an annual loss of a million of dollars to the revenues of the Department. My belief is confirmed, not only by the number of such letters forwarded to the Dead-Letter Division of this Office as "held for postage," but also by the proffer of canceled stamps for sale to the Department and to the contractors for furnishing the postage-stamps.

The ease with which the cancellation marks can be removed from stamps is a great incentive to this fraud, especially in view of the fact that in the larger offices throughout the country it is impossible to critically examine every letter posted in order to ascertain whether or not the stamp thereon has previously been used. Such an examination would either cause serious delay in dispatching the mails or involve the Department in a greater expenditure than would be warranted in attempting to protect it from loss.

None of the post-offices throughout the country are furnished with canceling-ink by the Department, and many of them are not even provided with postmarking and canceling stamps. The larger offices are permitted to buy such ink as may be selected by them for that purpose, but the Department has never undertaken to furnish indelible canceling-ink to those offices supplied by it with the postmarking and canceling stamps. At many of the smaller offices, not supplied with such stamps, no trouble whatever is taken to cancel the postage-stamps by drawing lines thereon with writing-ink, and, consequently, no difficulty is presented to the re-use of such uncanceled stamps.

In this connection the recommendations made in my last annual report, as well as my remarks in this report under the heading of "registered letters," especially apply. If the furnishing of postmarking and canceling stamps to all offices is essential to the proper workings of the registered-letter system, such articles are of more importance to the general postal service. In all foreign countries the greatest care in this respect is taken. The postmarks on undelivered foreign letters received at the Dead-Letter Division of this Office are generally clearly and sharply imprinted, while the cancellation of their postage-stamps is almost, if not quite, perfect. I am informed that the English government paid quite a large sum for the recipe setting forth the component

parts of an ink which, after repeated tests, was found to be nearly, if not quite, irremovable, and throughout Europe every post-office is furnished with postmarking and canceling stamps and canceling-ink.

In order not only to facilitate the workings of the registered-letter system, but to prevent fraud in the re-use of stamps, the same practice should be observed by the Post Office Department in this country. If it is deemed conducive to public interests to establish a post-office at any place, the person who is placed in charge of that office should be supplied with everything necessary for the proper performance of his duties and the protection of the Government, no matter whether his salary or emoluments amount to one dollar or one hundred dollars per year; and until the Department does furnish to every post-office throughout the country a complete outfit of postmarking and canceling stamps, with the necessary supply of indelible canceling-ink, the washing and re-use of postage-stamps cannot be prevented.

Very respectfully, &c.,

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 2.—*Statement of payments made under sundry heads, charged to miscellaneous accounts, for the fiscal year ended June* 30, 1874.

For allowances to postmasters for office-repairs, gas-fixtures, telegraphing, and miscellaneous items	$105,309 51
For preparation and publication of post-route maps	25,792 18
For post-office and official stamped envelopes	50,106 41
For registered package envelopes and seals	19,420 54
For fees to United States marshals	1 320 28
For fees to clerks of courts	796 08
For fees to attorneys	2,532 35
For engraving, printing, and binding drafts and warrants	1,180 30
For expenses in negotiating postal convention with France	300 00
For expenses in examining the registered-letter system	312 75
For moieties to informers in cases of violation of post-office law	1,459 63
For law-books for use of Post-Office Department	687 00
For safe for Dead-Letter Office	337 50
Total	209,554 53

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 3.—*Estimate of indebtedness of Post-Office Department for fiscal year ended June* 30, 1874, *not yet adjusted.*

Balances due foreign countries		$125,900 00
Mail-service under contract or recognized, but not yet reported for payment		549,735 63
Mail-service unrecognized:		
Fiscal year ended June 30, 1872	$50,336 00	
Fiscal year ended June 30, 1873	23,9436 00	
Fiscal year ended June 30, 1874	495,797 00	
		785,569 00
		1,461,204 63

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 4.—*Statement exhibiting receipts and expenditures, under appropriate heads, by quarters, and June*

RECEIPTS.

	Quarter ended September 30, 1873.	Quarter ended December 31, 1873.	Quarter ended March 31, 1874.	Quarter ended June 30, 1874.
Letter-postage	$76,187 48	$75,288 96	$89,260 88	$85,557 93
Newspapers and pamphlets	348,658 47	349,354 47	353,195 14	341,165 9[illegible]
Emoluments	316,702 03	308,497 40	302,422 40	299,304 02
Fines	2,363 10	1,793 15	4,169 41	2,385 46
Stamps, stamped envelopes, and postal cards	6,355,160 46	5,291,396 02	5,752,501 07	5,989,664 65
Dead-letters	1,951 00	2,800 00	2,070 00	1,900 0[illegible]
Miscellaneous	6,019 61	3,371 58	3,742 25	4,990 7[illegible]
Revenue from money-order business				105,19[illegible] 12
Total	7,107,042 15	6,032,501 58	6,507,361 15	6,830,166 94

Comparison, including revenue from money-order business and official postage-stamps:
Increase of receipts over year ended June 30, 1873, $3,480,330 25, or 15.134 + per cent.
Increase of receipts over year ended June 30, 1872, $4,561,681 63, or 20.81 + per cent.

EXPENDITURES.

Compensation to postmasters	$1,456,328 72	$1,454,243 56	$1,449,252 11	$1,458,647 7[illegible]
Ship, steamboat, and way letters	1,280 79	1,143 49	701 01	1,063 13
Transportation of the mails	4,485,978 77	4,812,615 42	4,717,122 48	4,865,602 3[illegible]
Wrapping-paper	6,450 00	6,450 00	1,825 00	5,475 0[illegible]
Office-furniture	6,774 41	15,819 14	4,690 78	5,437 5[illegible]
Advertising	57,418 49	12,857 22	9,613 81	29,851 16
Mail-bags and catchers	63,269 80	49,871 91	49,503 51	50,069 54
Blank-agent and assistants				
Mail locks and keys	11,642 55	19,425 12	6,731 38	2,344 6[illegible]
Postmarking and canceling stamps	1,919 18	2,165 82	1,994 69	1,873 8[illegible]
Mail-depredations and special agents	40,407 49	38,290 21	53,278 11	33,502 [illegible]
Clerks for post-offices	795,909 12	818,535 80	824,197 83	859,319 6[illegible]
Postage-stamps, stamped envelopes, and postal cards	260,075 59	141,568 36	200,112 03	243,440 1[illegible]
Letter-carriers	436,746 40	455,915 51	455,693 35	454,063 42
Dead letters	550 88		2,995 17	2,437 9[illegible]
Repairs to Post-Office building				
Twine	13,728 00	10,547 50	6,006 50	19,292 5[illegible]
Letter-balances	663 00		2,336 90	1,750 0[illegible]
Rent, light, and fuel	82,603 88	92,900 40	96,138 03	105,056 14
Miscellaneous:				
Stationery	9,581 10	9,799 45	8,961 76	8,126 6[illegible]
Post-route maps	4,714 20	3,820 89	7,569 0[illegible]	6,294 1[illegible]
Miscellaneous	36,845 55	53,595 80	41,913 96	54,800 5[illegible]
Balances due foreign countries:				
Great Britain	10,242 37	23,140 72	52,122 44	
North German Union	30,210 83	20,898 93	18,496 60	21,631 5[illegible]
Belgium	2,105 42	2,200 57	5,202 43	
Denmark	1,095 00			760 7[illegible]
Sweden			5,063 62	11,713 6[illegible]
Total	7,816,541 63	8,045,805 82	8,021,522 58	8,242,544 5[illegible]

Comparison:
Increase of expenditures over year ended June 30, 1873, $3,041,468 91, or 10.457 + per cent.
Increase of expenditures over year ended June 30, 1872, $5,468,222 27, or 20.510 + per cent.

for the fiscal year ended June 30, 1874, *compared with the fiscal years ended June* 30, 1873, 30, 1872.

RECEIPTS.

Total year ended June 30, 1874.	Aggregate for comparison.	Total year ended June 30, 1873.	Compared with year ended June 30, 1873.		Total year ended June 30, 1872.	Compared with year ended June 30, 1872.	
			Increase.	Decrease.		Increase.	Decrease.
$326,295 25	.....	$348,849 49	.....	$22,554 24	$345,868 58	.....	$19,573 33
1,392,374 06	.....	1,072,998 19	$319,375 87	.....	985,940 21	$406,433 85	.....
1,226,925 85	.....	1,150,042 38	76,883 47	.....	1,086,895 50	140,030 35	.....
10,711 12	.....	3,917 39	6,793 73	.....	18,616 63	.....	7,905 51
23,388,722 20	.....	20,324,817 50	3,063,904 70	.....	19,009,921 44	4,378,800 76	.....
8,721 00	.....	6,208 00	2,513 00	.....	7,299 00	1,422 00	.....
18,124 22	.....	21,324 62	.....	3,200 40	17,451 20	673 02	.....
105,198 12	.....	68,584 00	36,614 12	.....	443,397 63	.....	338,199 51
26,477,071 82	.....	22,996,741 57	3,506,084 89	25,754 64	21,915,390 19	4,927,359 98	365,678 35
22,996,741 57	.....	.....	25,754 64	.....	26,477,071 82	365,678 35	.....
3,480,330 25	.....	.....	3,480,330 25	.....	4,561,681 63	4,561,681 63	.....

Comparison, excluding revenue from money-order business and official postage-stamps:
Increase of receipts over year ended June 30, 1873, $1,674,411 27, or 7.30 + per cent.
Increase of receipts over year ended June 30, 1872, $3,130,576 28, or 14.579 + per cent.

EXPENDITURES.

35,818,472 17	.....	$5,725,468 12	$93,004 05	.....	$5,121,665 20	$696,806 97	.....
4,188 42	.....	4,257 96	.....	$69 54	7,011 06	.....	$2,822 64
18,881,319 05	.....	16,833,682 58	2,047,636 47	.....	15,547,820 53	3,333,498 52	.....
20,200 00	.....	23,494 49	.....	3,294 49	28,683 68	.....	8,483 68
32,711 90	.....	6,368 57	26,343 33	.....	6,535 58	26,176 32	.....
109,740 68	.....	81,412 60	28,328 08	.....	53,112 33	56,628 35	.....
212,714 76	.....	170,227 20	42,487 56	.....	191,174 00	21,540 76	.....
.....	.....	7,500 00	.....	7,500 00	9,177 52	.....	9,177 52
40,143 71	$48,097 25	38,377 30	9,719 95	.....	28,169 07	19,928 18	.....
7,953 54							
165,478 63	.....	157,963 26	7,515 37	.....	131,776 47	33,702 16	.....
3,297,961 77	.....	2,978,614 24	319,347 53	.....	2,785,253 63	512,708 14	.....
845,196 08	.....	653,921 76	191,274 32	.....	535,828 84	309,367 24	.....
1,802,418 68	.....	1,422,990 69	379,427 99	.....	1,385,965 76	416,452 92	.....
5,983 89	.....	.....	5,983 89	.....	.....	5,983 89	.....
.....	.....	11,735 15	.....	11,735 15	.....	.....	.....
49,374 50	677,046 35	669,890 70	7,155 65	.....	573,426 34	103,620 01	.....
4,749 90							
376,698 45							
36,468 97							
22,398 33							
187,156 20							
85,505 53	.....	44,957 18	40,548 35	.....	116,414 02	.....	30,908 49
91,237 88	.....	238,869 29	.....	147,631 41	127,237 14	.....	35,999 26
9,508 42	.....	11,533 13	.....	2,024 71	8,941 14	567 28	.....
1,855 88	.....	3,681 45	.....	1,825 57	.....	1,855 88	.....
16,777 24	.....	.....	16,777 24	.....	.....	16,777 24	.....
32,126,414 58	.....	29,084,945 67	3,215,549 78	174,080 87	26,658,192 31	5,555,613 86	87,391 59
29,084,945 67	.....	.....	174,080 87	.....	32,126,414 58	87,391 59	.....
3,041,468 91	.....	.....	3,041,468 91	.....	5,468,222 27	5,468,222 27	.....

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 5.—*Receipts and disbursements at Treasury*

Depositories.	Deposits.	Grants from Treasury.	By transfer.	Aggregate accumulation.	Aggregate receipts.
Treasurer U. S., Washington, D. C.	$457,018 75		$603,273 28	$1,060,292 03	$457,018 75
Asst. treasurer U. S., Baltimore, Md.	154,415 83		280,000 00	434,415 83	154,415 83
Asst. treasurer U. S., Boston, Mass	566,144 54			566,144 54	566,144 54
Asst. treasurer U. S., Charleston, S. C.	41,294 29		250,000 00	291,294 29	41,294 29
Asst. treasurer U. S., Chicago, Ill.	185,475 38		820,000 00	1,005,475 38	185,475 38
Asst. treasurer U. S., Cincinnati, Ohio	200,380 84		240,000 00	440,380 84	200,380 84
Asst. treasurer U. S., New Orleans, La.	106,837 30		390,000 00	496,837 30	106,837 30
Asst. treasurer U. S., New York, N. Y.	2,857,410 62	$6,439,044 71	175,000 00	9,471,455 33	9,296,455 33
Asst. treasurer U. S., Philadelphia, Pa.	512,509 49		250,000 00	762,509 49	512,509 49
Asst. treasurer U. S., San Francisco, Cal.	281,330 83		100,000 00	381,330 83	281,330 83
Asst. treasurer U. S., Saint Louis, Mo.	127,431 17		650,000 00	777,431 17	127,431 17
Designated depository, Buffalo, N. Y.	3,820 00			3,820 00	3,820 00
Designated depository, Pittsburgh, Pa.	562 49			562 49	562 49
Designated depository, Louisville, Ky.					
Designated depository, Mobile, Ala.					
First Nat'l Bank, Dubuque, Iowa					
First Nat'l Bank, Galveston, Tex	1,010 44			1,010 44	1,010 44
First Nat'l Bank, Leavenworth, Kans.	2,162 46			2,162 46	2,162 46
First Nat'l Bank, Memphis, Tenn	1,286 35			1,286 35	1,286 35
First Nat'l Bank, New Albany, Ind					
First Nat'l Bank, Portland, Oreg	491 73			491 73	491 73
First Nat'l Bank, Richmond, Va.					
First Nat'l Bank, Springfield, Ill	5,289 65			5,289 65	5,289 65
First Nat'l Bank, Trenton, N. J					
First Nat'l Bank, Cincinnati, Ohio	505 95			505 95	505 95
First Nat'l Bank, Milwaukee, Wis.	151 00			151 00	151 00
First Nat'l Bank, Saint Paul, Minn.	232 10			232 10	232 10
First Nat'l Bank, Nashville, Tenn.	113 31			113 31	113 31
Second Nat'l Bank, Detroit, Mich					
Second Nat'l Bank, Leavenworth, Kans.					
Second Nat'l Bank, New Haven, Conn.					
Second Nat'l Bank, Utica, N. Y.	352 35			352 35	352 35
City Nat'l Bank, Grand Rapids, Mich.	956 44			956 44	956 44
Merchants' Nat'l Bank, Savannah, Ga.	31,610 13			31,610 13	31,610 13
Merchants' Nat'l Bank, Clevelaud, Ohio	1,134 39			1,134 39	1,134 39
Merchants' Nat'l Bank, Little Rock, Ark	470 72			470 72	470 72
East Tenn. Nat'l Bank, Knoxville, Tenn.					
National Bank of Lawrence, Kans.					
Atlanta National Bank, Atlanta, Ga.	1,038 01			1,038 01	1,038 01
Indianapolis N'l Bank, Indianapolis, Ind	2,424 96			2,424 96	2,424 96
Lynchburgh N'l Bank, Lynchburgh, Va.	116 25			116 25	116 25
Raleigh Nat'l Bank, Raleigh, N. C.	555 03			555 03	555 03
San Antonio N'l Bank, San Antonio, Tex	283 44			283 44	283 44
Omaha Nat'l Bank, Omaha, Nebr.	7,150 43			7,150 43	7,150 43
Total	5,551,966 57	6,439,044 71	3,752,273 28	15,749,284 66	11,991,011 28

Comparative statement between fiscal years

Deposits for fiscal year of 1874		$5,551,966 57
Deposits for fiscal year of 1873		4,087,272 57
Gain in deposits for 1874		1,464,693 80
Grants from the Treasury for 1874	$6,439,044 71	
Grants from the Treasury for 1873	4,590,475 00	
	1,848,569 71	
Add gain in deposits for 1874	1,464,693 80	
Aggregate receipts for 1874		11,991,011 28
Aggregate receipts for 1873		8,677,747 57
Increase of receipts for 1874	3,313,263 51	3,313,263 71
Increase of receipts for 1874		3,409,596 03
Deduct decrease of receipts for 1874		96,332 32
Increase for 1874, as shown above		3,313,263 71

depositories during the fiscal year ended June 30, 1874.

Increase of receipts over 1873.	Decrease of receipts from 1873.	Warrants drawn.	Increase over 1873.	Decrease from 1873.	Transfer account.		Balance subject to draft June 30, 1874.
					From—	To—	
$399,550 12		$884,797 66	$344,788 58		$15,000 00	$603,273 28	$160,788 87
30,132 55		395,949 01	110,148 59			280,000 00	49,077 97
15,189 21		238,292 52		$369,691 70	335,000 00		28,992 11
	$6,242 01	272,631 51	784 12			250,000 00	20,241 80
185,340 98		962,109 31	962,109 31			820,000 00	43,500 47
200,380 84		394,967 81	394,967 81			240,000 00	45,413 03
1,369 02		482,083 69		10,034 59		390,000 00	15,034 17
2,502,425 38		6,217,256 82	556,491 95		3,225,000 00	175,000 00	70,685 05
25,331 19		567,569 68		5,895 33	130,000 00	250,000 00	88,309 70
26,560 67		347,261 30	37,321 87			100,000 00	48,138 12
	46,517 95	797,068 03		170,741 12		650,000 00	1,899 63
3,351 07					3,202 65		700 00
	2,921 40				642 52		372 48
	515 00				515 00		
	29,752 81						
	415 91						
583 48					1,089 94		
1,563 91					831 87		1,330 59
	1,948 19				3,044 23		
	177 00						
416 73					340 14		151 59
	157 99						
5,157 47					432 18		4,989 65
	78 17						
505 95					505 95		
151 00					151 00		
232 10							232 10
113 31							113 31
	3,527 13						
	156 70						
	500 00						
352 35					352 35		
956 44					956 44		
	1,321 15				27,729 93		5,150 00
116 40					1,576 18		102 50
	80 61				470 72		
	114 44						
	55 59				55 59		
838 01					919 82		118 19
1,774 92					2,474 21		123 00
12 75							116 25
	1,585 47						555 03
	265 25				832 13		
7,150 43					7,150 43		
409,596 28	96,332 77	11,559,987 34	2,406,612 23	556,362 74	3,758,273 28	3,758,273 28	586,135 61

1873 and 1874 at Treasury depositories.

Warrants drawn for 1874	$11,559,987 34	
Warrants drawn for 1873	9,709,737 85	
Increase of warrants for 1874		$2,406,612 23
Deduct decrease of warrants for 1874		556,362 74
Increase for 1874	1,850,249 49	1,850,249 49
Balance subject to draft June 30, 1874		586,135 61
Balance subject to draft June 30, 1873		154,600 86
Increase for 1874		431,534 75
Total number of warrants issued during fiscal year of 1874		10,649
Total number of warrants issued during fiscal year of 1873		8,005
Increase for 1874		2,644

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 6.—*Receipts and disbursements at depository post-offices on account fiscal year ended June 30 1874.*

Offices.	State.	Proceeds.	Deposits.	Collections.	Aggregate accumulation.	Amount subject to draft June 30, 1873.	Credit balance June 30, 1873.	Total.	Disbursements.	Amount subject to draft June 30, 1874.	Credit balance. June 30, 1874.
Albany	New York	$72,250 37	$76,113 11	$50 73	$148,414 21	$23,132 11		$171,546 32	$145,216 88	$26,329 44	
Atlanta	Georgia	25,195 50	8,157 91	4 00	33,357 41	2,545 31		35,902 72	35,353 11	549 61	
Bangor	Maine	16,914 70	9,669 87	2 33	26,586 90	1,937 94		28,524 84	26,103 64	2,421 20	
Binghamton	New York	18,910 41	6,723 07	24 63	25,658 11	3,907 53		29,565 64	21,839 26	7,726 38	
Batavia	...do	4,261 02	267 65	440 39	4,969 06	738 38		5,707 44	2,676 84	3,030 60	
Buffalo	...do	103,689 00	17,777 26	62 66	121,528 92	2,537 43		124,066 35	117,386 32	6,680 03	
Cleveland	Ohio	116,764 98	19,128 08		135,893 06	14,068 53		149,961 59	119,393 96	30,567 63	
Columbus	...do	37,019 24	5,351 81	947 28	43,318 33	7,734 50		51,052 83	39,620 25	11,432 58	
Concord	New Hampshire	13,653 27	21,000 16	211 88	34,865 31	5,783 51		40,648 82	36,927 45	3,721 37	
Davenport	Iowa	18,145 67	2,931 07		21,076 74	1,989 73		23,066 47	23,158 37		$91 90
Des Moines	...do	20,869 64	10,329 56	254 60	31,453 80	3,755 71		35,209 51	28,806 48	6,403 03	
Detroit	Michigan	124,427 47	13,124 50	3,677 14	141,229 11	24,277 28		165,506 39	148,188 72	17,317 67	
Dover	Delaware	1,562 59	1,197 25		2,759 84	289 74		3,049 58	2,683 85	365 73	
Dubuque	Iowa	19,660 47	16,105 98	56 79	35,823 24	3,645 54		39,468 78	35,645 21	3,823 57	
Easton	Pennsylvania	8,356 44	1,142 72	19 61	9,518 77	1,094 92		10,613 69	11,382 21		768 52
Evansville	Indiana	13,974 24	6,238 91	80 70	20,293 85	4,128 15		24,422 00	23,550 16	871 84	
Fort Wayne	...do	14,286 65	6,933 18		21,219 83	4,197 22		25,417 05	22,254 44	3,162 61	
Geneva	New York	6,741 66	2,281 89	208 54	9,232 09	4,613 11		13,845 20	9,025 57	4,819 63	
Grand Rapids	Michigan	25,743 28	6,036 61		31,779 89	4,914 04		36,693 93	32,355 84	4,338 09	
Harrisburgh	Pennsylvania	34,894 37	3,656 64	467 03	39,018 04	8,754 20		47,772 24	41,281 91	6,490 33	
Hartford	Connecticut	77,446 23	19,234 22	4,251 92	100,932 37	6,599 90		107,532 27	86,526 76	21,005 51	
Huntsville	Alabama	2,786 91	350 82	291 98	3,438 71	307 20		3,745 91	3,321 85	424 06	
Indianapolis	Indiana	60,640 10	3,051 12	17 10	63,708 32	2,574 35		66,282 67	62,783 18	3,499 49	
Kalamazoo	Michigan	9,335 40	3,176 22	402 32	12,913 94	1,832 99		14,746 93	12,844 06	1,902 87	
Keene	New Hampshire	5,186 20	2,966 04	180 50	8,332 74	3,144 72		11,477 46	10,649 64	827 82	
Knoxville	Tennessee	8,319 75	2,180 61	1,634 87	12,135 23	911 94		13,047 17	11,388 69	1,658 48	
La Fayette	Indiana	10,829 39	4,226 24	95 04	15,150 67	3,553 26		18,703 93	17,261 59	1,442 34	
Lancaster	New Hampshire	1,300 18	1,892 53		3,192 71	552 73		3,745 44	2,276 99	1,468 45	
Leavenworth	Kansas	21,874 76	3,600 02	3,682 33	39,157 11	1,265 94		40,423 05	38,993 33	1,429 72	
Lexington	Kentucky	10,212 00	5,201 68	1,044 15	16,457 83	1,214 75		17,672 58	14,226 04	3,446 54	
Lima	Ohio	3,421 76	1,086 14	19 50	4,527 40	2,272 17		6,799 57	6,186 44	613 13	
Louisville	Kentucky	107,178 84	5,280 83	311 70	112,771 37	5,926 22		118,697 59	109,538 94	9,158 65	
Lowell	Massachusetts	29,851 94	1,990 74		31,842 68	9,748 33		41,591 01	39,498 12	2,092 89	
Madison	Wisconsin	15,968 00	3,217 61		19,185 61		$325 87	18,859 74	19,600 12		740 38
Meadville	Pennsylvania	7,340 24	3,406 95	1,940 73	12,687 92	1,439 92		14,127 84	14,379 03		251 19
Memphis	Tennessee	51,351 06	17,175 50	23,761 01	92,287 57	3,958 04		96,245 61	94,617 62	1,627 99	
Milwaukee	Wisconsin	115,258 26	27,935 99	1,520 46	144,714 71	9,512 19		154,226 90	142,328 11	11,898 79	
Mobile	Alabama	32,118 49	4,606 85	298 06	37,023 40	1,425 58		38,448 98	39,923 56		1,474 58
Montpelier	Vermont	4,760 45	4,003 54	102 18	8,866 17	1,405 72		10,271 89	6,774 40	3,497 49	
Nashville	Tennessee	29,774 18	14,113 07	861 73	44,748 98	401 18		45,150 16	40,633 49	4,516 67	
Newark	New Jersey	70,157 37	17,861 31	73 85	88,092 53	10,913 51		99,006 04	67,867 28	30,438 76	
New Haven	Connecticut	64,113 05	33,271 75	801 10	98,186 50	6,390 07		104,517 47	74,057 54	30,459 93	
Newburgh	New York	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	

Peoria	Illinois	1,680 29	2,888 62		4,568 91	944 27		5,513 18	5,177 60	335 58	
Pittsburgh	Pennsylvania	24,594 80	7,940 57		32,735 47	4,007 38		36,742 85	34,782 60	1,960 25	
Plattsburgh	New York	162,023 22	20,455 94	24,227 41	219,706 57	9,810 08		229,516 65	199,175 94	30,340 71	
Portland	Maine	4,036 79	1,991 48		6,028 27	2,162 75		8,191 02	6,727 85	1,463 17	
Portsmouth	Ohio	54,587 29	27,373 54	20 45	81,981 28	12,584 90		94,566 18	84,679 29	9,886 89	
Providence	Rhode Island	6,669 82	8,256 90	220 07	15,139 79	984 31		16,124 10	15,052 43	1,071 67	
Quincy	Illinois	106,928 05	25,862 87	100 00	132,891 82	17,891 79		150,783 61	116,816 54	33,967 07	
Raleigh	North Carolina	19,161 30	3,321 04	3,700 00	26,182 34	811 70		26,994 04	25,913 19	1,080 85	
Richmond	Virginia	9,785 91	4,004 63	2,891 90	16,682 44	1,715 33		18,397 77	17,278 78	1,118 99	
Ripon	Wisconsin	53,942 72	8,986 77	693 11	63,622 60	4,200 22		67,822 82	62,369 19	5,453 63	
Rochester	New York	2,151 49	311 29	265 41	2,728 19	662 02		3,390 21	2,329 58	1,060 63	
Rutland	Vermont	88,317 37	16,815 12	332 25	105,464 74	16,480 23		121,944 97	105,954 64	15,990 33	
Saint Paul	Minnesota	5,403 84	6,780 42	226 64	12,410 90	1,733 14		14,144 04	14,054 99	89 05	
Sandusky	Ohio	25,554 46	16,883 73	1,109 39	43,547 58	6,038 29		49,585 87	47,299 76	2,286 11	
Scranton	Pennsylvania	25,699 51	1,755 98	15 54	27,471 03	547 58		28,018 61	24,996 78	3,021 83	
Springfield	Illinois	14,579 63	28,695 89	375 46	43,650 98	4,264 40		47,915 38	45,029 14	2,886 24	
Springfield	Massachusetts	16,706 26	16,567 03	19 85	33,293 14	1,276 34		34,569 48	32,600 88	1,968 60	
Steubenville	Ohio	43,459 09	36,418 97	354 00	80,232 06	9,998 51		90,230 57	72,852 76	17,377 81	
Syracuse	New York	6,403 75	3,024 72	56 00	9,484 47	2,912 56		12,397 03	9,494 79	2,902 24	
Urbana	Ohio	51,401 36	15,139 03	2 33	66,542 72	15,495 26		82,037 98	67,635 98	14,402 00	
Utica	New York	5,363 27	598 92	254 82	6,217 01	944 47		7,161 48	3,176 31	3,985 17	
Vincennes	Indiana	38,292 56	11,985 14	89 82	50,357 52	9,417 03		59,774 55	47,920 64	11,853 91	
Wheeling	West Virginia	2,532 31	2,375 39	377 88	5,285 58	7 46		5,293 04	4,705 75	587 29	
Williamsport	Pennsylvania	14,743 68	4,379 68	6 17	19,129 53	2,422 72		21,552 25	16,750 40	4,801 85	
Wooster	Ohio	14,571 21	2,934 06	47 35	17,552 62	2,469 68		20,022 30	14,115 75	5,906 55	
Worcester	Massachusetts	4,122 74	1,761 69		5,884 43	2,970 37		8,854 80	4,293 00	4,561 80	
Zanesville	Ohio	53,039 73	18,379 59	46 62	71,465 94	9,089 84		80,555 78	71,302 04	9,253 74	
Miscellaneous		12,879 34	1,617 82	194 27	14,691 43	4,580 71		19,272 14	9,828 01	9,444 13	
			76,639 18		76,639 18			76,639 18	76,639 18		
Total		2,322,401 75	798,303 39	85,899 17	3,206,604 31	346,618 08	325 87	3,552,896 52	3,083,149 19	473,073 90	3,326 57

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 7.—*Postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards issued during the fiscal year ended June* 30, 1874.

ORDINARY POSTAGE-STAMPS.

Quarter ended—	NUMBER AND DENOMINATIONS OF STAMPS.										Value.
	1-cent.	2-cent.	3-cent.	6-cent.	7-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.	90-cent.	
September 30, 1873	21, 545, 600	11, 365, 050	106, 718, 300	2, 953, 950	229, 700	832, 490	316, 475	495, 140	54, 125	55, 420	10, 680	$4, 072, 347 00
December 31, 1873	25, 641, 700	17, 247, 600	108, 041, 600	2, 036, 550	231, 100	827, 010	281, 050	324, 100	86, 675	126, 130	17, 980	4, 256, 852 00
March 31, 1874	31, 548, 400	14, 689, 500	115, 068, 100	3, 394, 050	413, 700	1, 028, 360	330, 825	85, 700	102, 500	100, 040	17, 040	4, 519, 257 00
June 30, 1874	32, 338, 200	16, 790, 100	111, 708, 600	3, 014, 300	351, 300	1, 183, 570	376, 375	49, 100	42, 075	44, 890	18, 270	4, 426, 786 00
Total	111, 073, 900	60, 092, 250	441, 536, 600	11, 998, 850	1, 225, 800	3, 871, 430	1, 304, 725	954, 040	285, 375	326, 480	63, 970	17, 275, 242 00

ORDINARY STAMPED ENVELOPES AND NEWSPAPER-WRAPPERS, PLAIN.

Quarter ended—	NUMBER AND DENOMINATIONS OF ENVELOPES.									NEWSPAPER-WRAPPERS.		Value.
	1-cent.	2-cent.	3-cent.	6-cent.	7-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.	1-cent.	2-cent.	
September 30, 1873	2, 262, 750	599, 250	12, 265, 950	36, 450	750	1, 750	5, 000	250	.....	.....	3, 885, 750	.....	$500, 933 30
December 31, 1873	2, 831, 500	589, 250	11, 888, 250	50, 250	.....	11, 000	2, 500	.....	.....	.....	4, 267, 250	200, 000	504, 997 94
March 31, 1874	3, 009, 000	650, 000	13, 763, 100	51, 350	500	15, 250	.....	.....	.....	.....	5, 437, 000	.....	580, 959 26
June 30, 1874	3, 312, 750	684, 250	13, 028, 900	36, 250	.....	1, 250	8, 000	1, 000	500	500	5, 560, 750	.....	561, 563 86
Total	11, 416, 000	2, 522, 750	50, 946, 200	174, 300	1, 250	29, 250	15, 500	1, 250	500	500	19, 170, 750	200, 000	2, 148, 454 36

STAMPED ENVELOPES BEARING A REQUEST FOR THE RETURN OF UNCLAIMED LETTERS, ETC.

Quarter ended—	NUMBER AND DENOMINATIONS OF ENVELOPES.							Value.
	1-cent.	2-cent.	3-cent.	6-cent.	7-cent.	10-cent.	12-cent.	
September 30, 1873	226, 250	271, 000	12, 814, 750	34, 500	.....	.....	500	$445, 475 85
December 31, 1873	207, 000	250, 000	11, 670, 000	42, 750	.....	.....	.....	406, 488 35
March 31, 1874	227, 500	334, 500	12, 714, 500	41, 000	500	1, 000	.....	444, 258 05
June 30, 1874	232, 500	323, 000	12, 496, 000	51, 500	.....	.....	1, 500	437, 516 15
Total	893, 250	1, 178, 500	49, 695, 250	169, 750	500	1, 000	2, 000	1, 733, 738 40

POSTAL CARDS.

Quarter ended—	Number of cards.	Value.
September 30, 1873	33, 208, 300	$332, 083 00
December 31, 1873	16, 283, 500	162, 835 00
March 31, 1874	19, 414, 700	194, 147 00
June 30, 1874	22, 172, 500	221, 725 00
Total	91 079, 000	910, 710 00

OFFICIAL POSTAGE-STAMPS.

Quarter ended—	NUMBER AND DENOMINATIONS OF STAMPS.															Value.
	1-cent.	2-cent.	3-cent.	6-cent.	7-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.	90-cent.	$2.	$5.	$10.	$20.	
Sept. 30, 1873	1, 780, 900	1, 794, 900	12, 682, 200	1, 762, 250	129, 800	283, 410	683, 400	552, 060	180, 475	144, 650	59, 913	363	363	363	363	$896, 213 70
Dec. 31, 1873	67, 000	160, 200	2, 173, 700	224, 850	3, 500	66, 200	125, 450	15, 500	21, 500	23, 000	7, 275	160	.....	.....	.....	125, 627 50
Mar. 31, 1874	104, 000	58, 200	3, 279, 400	221, 850	600	77, 600	34, 950	28, 600	38, 450	53, 700	28, 050	.....	.....	.....	.....	189, 766 00
June 30, 1874	79, 500	91, 300	4. 464, 600	598, 150	6, 500	70, 200	53, 250	30, 200	23, 250	23, 050	11, 000	.....	.....	.....	.....	213, 238 00
Total	2, 031, 400	2, 104, 600	22, 599, 900	2, 807, 100	140, 400	497, 410	897, 050	626, 360	263, 675	244, 400	106, 238	463	363	363	363	1, 415, 845 20

No. 7.—*Postage-stamps, stamped envelopes, newspaper-wrappers, &c.*—Continued.

OFFICIAL STAMPED ENVELOPES AND NEWSPAPER-WRAPPERS.

Quarter ended—	NUMBER AND DENOMINATIONS OF ENVELOPES.									NEWSPAPER-WRAPPERS.		Value.
	1-cent.	2-cent.	3-cent.	6-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.	1-cent.	2-cent.	
Sept. 30, 1873	2,000	179,500	4,591,200	141,100	500	5,500	1,500	1,000	500	500,600	.....	$157,322 56
Dec. 31, 1873	.....	91,000	1,095,150	36,400	.....	.....	.....	.....	.....	400,000	200	41,382 76
Mar. 31, 1874	.....	67,000	1,810,650	48,600	.....	.....	.....	.....	.....	500,000	100	64,250 03
June 30, 1874	.....	227,600	2,508,000	41,700	.....	300	.....	.....	100	650,100	.....	90,501 31
Total	2,000	565,100	10,005,000	267,800	500	5,800	1,500	1,000	600	2,050,700	300	353,456 66

RECAPITULATION.

Description.	Whole number.	Value.
Postage-stamps, ordinary	632,733,420	$17,275,242 00
Stamped envelopes, plain	65,107,500	1,927,952 30
Stamped envelopes, request	51,940,250	1,733,738 40
Newspaper-wrappers, ordinary	19,370,750	220,502 06
Postal cards	91,079,000	910,790 00
Official postage-stamps	32,320,085	1,415,845 20
Official stamped envelopes and wrappers	12,900,300	353,456 66
Aggregate	9 05,451,305	23,837,526 62

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 8.—*Postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards issued during the fiscal year ended June 30, 1874.*

Description.	Quarter ended September 30, 1873.	Quarter ended December 31, 1873.	Quarter ended March 31, 1874.	Quarter ended June 30, 1874.	Total.
Ordinary postage-stamps.					
One-cent	21, 545, 600	25, 641, 700	31, 548, 400	32, 338, 200	111, 073, 900
Two-cent	11, 365, 050	17, 247, 600	14, 689, 500	16, 790, 100	60, 092, 250
Three-cent	106, 718, 300	108, 041, 600	115, 068, 100	111, 708, 600	441, 536, 600
Six-cent	2, 953, 950	2, 636, 550	3, 394, 050	3, 014, 300	11, 998, 850
Seven-cent	229, 700	231, 100	413, 700	351, 300	1, 225, 800
Ten-cent	832, 490	827, 010	1, 028, 360	1, 183, 570	3, 871, 430
Twelve-cent	316, 475	281, 050	330, 825	376, 375	1, 304, 725
Fifteen-cent	495, 140	324, 100	85, 700	49, 100	954, 040
Twenty-four-cent	54, 125	86, 675	102, 500	42, 075	285, 375
Thirty-cent	55, 420	126, 130	100, 040	44, 890	326, 480
Ninety-cent	10, 680	17, 980	17, 040	18, 270	63, 970
Value	$4, 072, 347 00	$4, 256, 852 00	$4, 519, 257 00	$4, 426, 786 00	$17, 275, 242 00
Ordinary stamped envelopes and newspaper-wrappers, plain.					
One-cent	2, 262, 750	2, 831, 500	3, 009, 000	3, 312, 750	11, 416, 000
Two cent	599, 250	589, 250	650, 000	684, 250	2, 522, 750
Three-cent	12, 265, 950	11, 888, 250	13, 763, 100	13, 028, 900	50, 946, 200
Six-cent	36, 450	50, 250	51, 350	36, 250	174, 300
Seven-cent	750		500		1, 250
Ten-cent	1, 750	11, 000	15, 250	1, 250	29, 250
Twelve-cent	5, 000	2, 500		8, 000	15, 500
Fifteen-cent	250			1, 000	1, 250
Twenty-four-cent				500	500
Thirty-cent				500	500
One-cent wrappers	3, 885, 750	4, 267, 250	5, 437, 000	5, 580, 750	19, 170, 750
Two-cent wrappers		200, 000			200, 000
Value	$500, 933 30	$504, 997 94	$580, 959 26	$561, 563 86	$2, 148, 454 36
Stamped envelopes bearing a request to return.					
One-cent	226, 250	207, 000	227, 500	232, 500	893, 250
Two-cent	271, 000	250, 000	334, 500	323, 000	1, 178, 500
Three-cent	12, 814, 750	11, 670, 000	12, 714, 500	12, 496, 000	49, 695, 250
Six-cent	34, 500	42, 750	41, 000	51, 500	169, 750
Seven-cent			500		500
Ten-cent			1, 000		1, 000
Twelve-cent	500			1, 500	2, 000
Value	$445, 475 85	$406, 488 35	$444, 258 05	$437, 516 15	$1, 733, 738 40
Postal cards.					
One-cent	33, 208, 300	16, 283, 500	19, 414, 700	22, 172, 500	91, 079, 000
Value	$332, 083 00	$162, 835 00	$194, 147 00	$221, 725 00	$910, 790 00
Official postage-stamps.					
One-cent	1, 780, 900	67, 000	104, 000	79, 500	2, 031, 400
Two-cent	1, 794, 900	160, 200	58, 200	91, 300	2, 104, 600
Three-cent	12, 682, 200	2, 173, 700	3, 279, 400	4, 464, 600	22, 599, 900
Six-cent	1, 762, 250	224, 850	221, 850	598, 150	2, 807, 100
Seven-cent	129, 800	3, 500	600	6, 500	140, 400
Ten-cent	283, 410	66, 200	77, 600	70, 200	497, 410
Twelve-cent	683, 400	125, 450	34, 950	53, 250	897, 050
Fifteen-cent	552, 060	15, 500	28, 600	30, 200	626, 360
Twenty-four-cent	180, 475	21, 500	38, 450	23, 250	263, 675
Thirty-cent	144, 650	23, 000	53, 700	23, 050	244, 400
Ninety-cent	59, 913	7, 275	28, 050	11, 000	106, 238
Two-dollar	363	100			463
Five-dollar	363				363
Ten-dollar	363				363
Twenty-dollar	363				363
Value	$896, 213 70	$125, 627 50	$180, 766 00	$213, 238 00	$1, 415, 845 20
Official stamped envelopes.					
One-cent	2, 000				2, 000
Two-cent	179, 500	91, 000	67, 000	227, 600	565, 100
Three-cent	4, 591, 200	1, 095, 150	1, 810, 650	2, 508, 000	10, 005, 000

No. 8.—*Postage-stamps, stamped envelopes, &c.*—Continued.

Description.	Quarter ended September 30, 1873.	Quarter ended December 31, 1873.	Quarter ended March 31, 1874.	Quarter ended June 30, 1874.	Total
Official stamped envelopes—Continued.					
Six-cent	141,100	36,400	48,600	41,700	[illegible]
Ten-cent	500				[illegible]
Twelve-cent	5,500			300	[illegible]
Fifteen-cent	1,500				[illegible]
Twenty-four-cent	1,000				[illegible]
Thirty-cent	500			100	[illegible]
One-cent wrappers	500,600	400,000	500,000	650,100	[illegible]
Two-cent wrappers		200	100		[illegible]
Value	$157,322 56	$41,382 76	$64,250 03	$90,501 31	[illegible]

RECAPITULATION.

Description.	Number.	Value.
Ordinary postage-stamps	632,733,420	[illegible]
Ordinary stamped envelopes, plain	65,107,500	[illegible]
Ordinary stamped envelopes, request	51,940,250	[illegible]
Total ordinary stamped envelopes	117,047,750	[illegible]
Newspaper-wrappers	19,370,750	[illegible]
Postal cards	91,079,000	[illegible]
Official postage-stamps	32,320,085	[illegible]
Official stamped envelopes	12,900,300	[illegible]
Whole number and value of stamps, stamped envelopes, wrappers, and cards	905,451,305	[illegible]

EDWARD W. BARBER
Third Assistant Postmaster-General.

No. 9.—*Statement of official postage-stamps and stamped envelopes furnished the several Executive Departments during the fiscal year ended June 30, 1874.*

OFFICIAL POSTAGE-STAMPS.

Names of Departments.	NUMBER AND DENOMINATIONS OF STAMPS.														Value.
	1-cent.	2-cent.	3-cent.	6-cent.	7-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.	90-cent.	$2.	$5.	$10.	$20.	
Executive	1,600	2,100	9,100	1,900	.....	1,550	.....	.....	.....	.....	.....	.....	.....	.....	.....	$600 00
State	9,800	9,800	25,800	13,800	7,800	7,800	5,800	5,800	5,800	5,800	2,043	463	363	363	363	23,389 70
Treasury	1,000,000	1,244,500	4,350,009	1,315,000	120,000	250,000	483,000	433,000	100,000	96,500	50,500	.....	.....	.....	.....	499,000 00
War	187,300	70,300	225,300	116,950	6,600	20,600	18,000	17,700	19,900	15,750	4,650	.....	.....	.....	.....	38,078 00
Navy	22,800	48,350	110,700	58,800	6,000	13,210	22,300	12,500	10,000	8,600	2,070	.....	.....	.....	.....	21,179 00
Post-Office	632,300	399,250	16,906,000	787,950	.....	73,500	218,600	67,860	47,900	37,600	30,150	.....	.....	.....	.....	663,037 00
Interior	108,600	227,900	854,000	425,700	.....	71,750	122,850	71,500	49,275	46,150	16,525	.....	.....	.....	.....	129,991 50
Justice	9,000	7,400	39,000	27,000	.....	3,000	7,500	4,000	800	2,000	300	.....	.....	.....	.....	5,890 00
Agriculture	60,000	95,600	80,000	60,000	.....	50,000	19,000	14,000	30,000	32,000	.....	.....	.....	.....	.....	34,680 00
Total	2,031,400	2,104,600	22,599,900	2,807,100	140,400	497,410	897,050	626,360	263,675	244,400	106,238	463	363	363	363	1,415,845 20

OFFICIAL STAMPED ENVELOPES.

Names of Departments.	NUMBER AND DENOMINATIONS OF ENVELOPES.									NEWSPAPER-WRAPPERS.		Value.
	1-cent.	2-cent.	3-cent.	6-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.	1-cent.	2-cent.	
War	2,000	2,100	314,500	18,000	500	5,800	1,500	1,000	600	2,050,700	300	$36,493 66
Post-Office	.....	563,000	9,690,500	249,800	.....	.....	.....	.....	.....	.....	.....	316,963 00
Total	2,000	565,100	10,005,000	267,800	500	5,800	1,500	1,000	600	2,050,700	300	353,456 66

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 10.—*Statement showin the increase in the issue of postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards for the year ended June 30, 1874, over the preceding year, exclusive of the issues for official use.*

Description.	1873.		1874.		Increase.		Per cent. increase.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.
Postage-stamps	601, 931, 520	$16, 681, 189 00	632, 733, 420	$17, 275, 242 00	30, 801, 900	$594, 053 00	5. 11+	3. 56+
Stamped envelopes, plain	65, 014, 600	1, 722, 512 00	65, 107, 500	1, 927, 952 30	92, 900	205, 440 30	0. 14+	11. 92+
Stamped envelopes, request	52, 201, 250	1, 544, 567 50	51, 940, 250	1, 733, 738 40	*261, 000	189, 170 90	*0. 49+	12. 24+
Newspaper-wrappers	13, 956, 750	140, 567 50	19, 370, 750	220, 502 06	5, 414, 000	79, 934 56	38. 79+	56. 86+
Postal cards	31, 094, 000	310, 940 00	91, 079, 000	910, 790 00	59, 985, 000	599, 850 00	192. 91+	192. 91+
Aggregate	764, 198, 120	20, 399, 766 00	860, 230, 920	22, 068, 224 76	96, 032, 800	1, 668, 448 76	12. 56+	8. 17+

* Decrease.

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 11.—*Statement showing the increase in the issue of postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards, including the issues for official use, for the year ended June 30, 1874, over the issues of the preceding year.*

Description.	1873.		1874.		Increase.		Per cent. increase.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.
Ordinary postage-stamps	601, 931, 520	$16, 681, 189 00	632, 733, 420	$17, 275, 242 00	30, 801, 900	$594, 053 00	5. 11+	3. 56+
Ordinary stamped envelopes, plain	65, 014, 600	1, 722, 512 00	65, 107, 500	1, 927, 952 30	92, 900	205, 440 30	0. 14+	11. 92+
Stamped envelopes, request	52, 201, 250	1, 544, 567 50	51, 940, 250	1, 733, 738 40	*261, 000	189, 170 90	*0. 49+	12. 24+
Newspaper-wrappers	13, 956, 750	140, 567 50	19, 370, 750	220, 502 06	5, 414, 000	79, 934 56	38. 79+	56. 86+
Postal cards	31, 094, 000	310, 940 00	91, 079, 000	910, 790 00	59, 985, 000	599, 850 00	192. 91+	192. 91+
Total	764, 198, 120	20, 399, 776 00	860, 230, 920	22, 068, 224 76	96, 032, 800	1, 668, 448 76	12. 56+	8. 17+
Add official stamps and stamped envelopes	.....	.....	45, 220, 385	1, 769, 301 86	45, 220, 385	1, 769, 301 86	.....	.....
Aggregate	764, 198, 120	20, 399, 776 00	905, 451, 305	23, 837, 526 62	141, 253, 185	3, 437, 750 62	18. 48+	16. 85+

* Decrease.

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 12.—*Statement showing the number of dead-letters received and disposed of during the fiscal year ended June 30, 1874.*

Character.	Received.		Delivered.		Filed.		Outstanding or not acted upon.		Destroyed.
	Number.	Actual or nominal value.	Number.	Actual or nominal value.	Number.	Actual or nominal value.	Number.	Actual or nominal value.	Number.
Containing $1 or more, (from last fiscal year)	3,918	$17,966 17							
Containing $1 or more	15,056	60,442 01	12,447	$57,480 64	2,596	$8,771 38	3,931	$12,156 15	
Containing less than $1, (from last fiscal year)	2,470	688 14							
Containing less than $1	17,424	5,230 67	7,810	2,380 77	2,470	688 14	9,614	2,849 90	
Registered, containing money	1,322	9,194 78	1,151	8,307 57	86	495 51	85	391 70	
Registered, containing no money	1,091		916		154		21		
Registered, foreign	3,824		*3,824						
Containing checks, drafts, bills of exchange, &c	23,320	4,543,907 31	18,620	3,841,699 48	974	230,238 69	3,726	471,979 25	
Containing jewelry or other property	14,007		9,567		4,140		300		
Containing photographs	38,767		29,797		8,970				
Containing receipts, bills of lading, &c	30,663		27,650		2,823		190		
Containing postage and revenue stamps, &c	37,028		34,378		2,650				
Letters without inclosures	1,851,364		1,020,171				516,493		†314,700
Letters which could not be returned, circulars, &c	2,308,219								2,308,219
Total domestic	4,348,473	4,637,429 08	1,166,331	3,909,868 46	24,863	240,183 62	534,360	487,377 00	2,622,919
Foreign letters returned unopened	253,300		225,893				27,407		
Total domestic and foreign	4,601,773	4,637,429 08	1,392,224	3,909,868 46	24,863	240,183 62	561,767	487,377 00	2,622,919

* Returned unopened to the countries where they originated.

† Returned unclaimed a second time.

EDWARD W. BARBER,
Third Assistant Postmaster-General.

No. 13.—*Comparative statement of the operations of the Dead-Letter Office for the fiscal years from* 1869 *to* 1874, *inclusive.*

Character.	1869.	1870.	1871.	1872.	1873.	1874.
Ordinary dead-letters received	2, 837, 472	2, 882, 868	2, 931, 244	2, 926, 012	2, 951, 281	3, 237, 794
Drop-letters received	450, 000	475, 300	492, 300	542, 804	657, 402	528, 105
* Unmailable letters received	388, 512	411, 600	400, 095	404, 229	385, 392	418, 836
Fictitious letters received	17, 417	86, 663	66, 264	35, 095	44, 318	43, 032
Registered letters received	3, 672	6, 153	6, 162	5, 152	2, 034	3, 411
Returned from abroad	62, 603	69, 461	77, 010	83, 422	93, 501	117, 295
Foreign origin	193, 186	220, 415	221, 673	244, 660	268, 420	253, 300
Total	3, 952, 862	4, 152, 460	4, 194, 748	4, 241, 374	4, 402, 348	4, 601, 773
Money-letters received ..... number.	32, 350	45, 265	33, 553	31, 515	31, 048	40, 190
Money-letters received ..... value.	$98, 183. 72	$98, 661. 42	$82, 621. 90	$71, 562. 48	$65, 899. 31	$93, 521. 77
Minor letters received ..... number.	16, 925	17, 860	19, 193	19, 919	22, 312	23, 320
Minor letters received ..... value.	$3, 011, 354. 71	$3, 075, 544. 90	$3, 075, 869. 23	$3, 320, 300. 38	$5, 729, 864. 80	$4, 543, 907. 31
Property letters received ..... number	9, 071	6, 921	6, 498	8, 456	10, 913	14, 007
Subminor letters received ..... number.	114, 185	110, 920	111, 064	108, 315	115, 048	106, 458
Photographs	.....	38, 009	42, 119	43, 093	42, 903	38, 767
Receipts, bills lading, &c	.....	27, 454	28, 196	26, 902	27, 656	30, 663
Stamps, souvenirs, &c	.....	45, 457	40, 749	38, 270	44, 489	37, 028

* As follows:

Held for postage	286, 307	312, 684	301, 472	312, 846	292, 710	327, 719
Misdirected	72, 999	68, 490	68, 373	62, 337	62, 994	58, 742
Blank	2, 678	3, 016	3, 518	4, 641	4, 622	3, 857
Hotel	26, 528	27, 410	26, 732	24, 405	25, 066	28, 518
Total	388, 512	411, 600	400, 095	404, 229	385, 392	418, 836

E. W. BARBER,
Third Assistant Postmaster-General.

POST-OFFICE DEPARTMENT, CONTRACT-OFFICE,
Washington, D. C., October 31, 1874.

SIR: For a statement of the mail-service for the contract-year ended June 30, 1874, &c., I have the honor to refer you to the tables hereto annexed.

Table A exhibits the character of the service, the length of routes, the number of miles of transportation, and the cost thereof, at the close of the contract-year.

Table B exhibits the railroad service, as in operation on the 30th of June, 1874; also the cost per mile in each State and Territory.

Table C exhibits the steamboat service, as in operation on the 30th of June, 1874.

Table D shows the increase and decrease of mail transportation and cost in the several States and Territories during the year ended June 30, 1874.

Table E shows the weight of the mails, the speed with which they are conveyed, the accommodations for mails and agents, the trips per week, and the rates of pay per mile per annum on railroad routes in the United States and Territories, the returns having been obtained with a view to the re-adjustment of the pay in accordance with the act of March 3, 1873.

Table F shows the re-adjustment, under the act of March 3, 1873, of the rates of pay per mile on certain railroad routes, and on certain new routes the adjustment of the rates based upon returns of the weight of the mails, the speed with which they are conveyed, the accommodations provided for mails and agents, and the number of trips per week.

Table G is a statement of the number, description, and cost of mail-bags and mail-catchers purchased by contract and put into service during the year ended June 30, 1874; also the number and cost of mail-locks and keys purchased and repaired during said year.

Table H is a list of railway post-office lines in the United States June 30, 1874, showing the increase in the service since June 30, 1873.

Through-mail tables, from 1 to 32, show the time occupied in the transmission of mails on a number of the leading and most important routes of the country for the year ended with the month of September, 1874.

Very respectfully, your obedient servant,

JOHN L. ROUTT,
Second Assistant Postmaster-General.

Hon. MARSHALL JEWELL,
Postmaster-General.

A.—*Table of mail-service for the year ended June 30, 1874, as exhibited by the state of the arrangements at the close of the year.*

[The entire service and pay on each route are set down to the State under which the route is numbered, though extending sometimes into other States, instead of being divided among the States in which the different portions lie.]

States and Territories.	Length of routes.	Annual transportation and cost. Colerity, certainty, and security.		By steamboat.		By railroad.		Total annual transportation by celerity, certainty, and security.	Total annual transportation by steamboat.	Total annual transportation by railroad.	Total annual transportation.	Total annual cost.
	Miles.	*Miles.*	*Dollars.*	*Miles.*	*Dollars.*	*Miles.*	*Dollars.*	*Miles.*	*Miles.*	*Miles.*	*Miles.*	*Dollars.*
Maine	4, 536	3, 509	81, 968	....	....	1, 027	136, 446	1, 615, 146	....	986, 466	2, 601, 612	218, 414
New Hampshire	1, 719	1, 012	28, 867	89	2, 678	618	64, 407	458, 848	28, 756	700, 643	1, 188, 247	95, 952
Vermont	2, 225	1, 577	49, 960	....	....	648	100, 455	827, 925	....	653, 915	1, 481, 840	150, 415
Massachusetts	2, 735	883	47, 255	30	2, 500	1, 822	306, 878	544, 024	18, 700	2, 710, 377	3, 273, 101	356, 633
Rhode Island	376	224	10, 448	....	....	152	19, 086	109, 512	....	274, 032	383, 544	29, 534
Connecticut	1, 646	618	27, 185	....	....	1, 028	129, 973	355, 862	....	1, 774, 331	2, 130, 193	157, 158
New York	12, 101	6, 255	259, 810	195	9, 200	5, 651	1, 159, 514	3, 139, 078	139, 707	8, 524, 431	11, 803, 216	1, 428, 524
New Jersey	2, 261	926	35, 620	72	3, 736	1, 263	144, 821	479, 459	70, 382	1, 943, 789	2, 493, 630	184, 177
Pennsylvania	13, 981	10, 021	292, 612	88	6, 011	3, 872	439, 525	4, 038, 966	46, 020	5, 758, 092	9, 843, 078	738, 148
Delaware	433	195	6, 277	....	....	238	18, 707	91, 988	....	209, 271	301, 259	24, 984
Maryland	3, 066	1, 779	66, 684	190	6, 150	1, 097	216, 768	1, 013, 350	77, 168	1, 817, 890	2, 908, 408	289, 602
West Virginia	5, 220	4, 605	58, 045	250	13, 320	365	33, 428	934, 648	108, 888	227, 788	1, 271, 324	104, 793
Virginia	9, 808	7, 353	125, 588	991	51, 307	1, 464	207, 095	1, 861, 735	366, 000	1, 525, 388	3, 753, 123	383, 990
North Carolina	8, 672	7, 196	87, 893	406	9, 185	1, 070	82, 033	1, 279, 434	87, 672	985, 869	2, 352, 975	179, 111
South Carolina	3, 884	2, 518	29, 701	51	1, 460	1, 315	117, 936	327, 821	8, 944	1, 242, 562	1, 579, 327	149, 097
Georgia	6, 452	3, 905	59, 254	224	4, 894	2, 323	181, 342	611, 598	39, 416	2, 286, 257	2, 937, 271	245, 490
Florida	8, 180	2, 358	36, 257	5, 378	176, 523	444	23, 171	348, 406	519, 920	304, 268	1, 172, 594	235, 951
Alabama	8, 096	5, 777	100, 243	309	5, 200	2, 010	183, 814	990, 574	64, 272	1, 647, 529	2, 702, 375	289, 257
Mississippi	5, 828	4, 455	79, 672	260	7, 500	1, 113	150, 128	747, 078	54, 080	1, 050, 024	1, 851, 182	237, 300
Louisiana	4, 805	3, 116	136, 329	1, 169	85, 199	520	66, 114	804, 597	347, 048	467, 366	1, 619, 011	287, 642
Texas	13, 233	11, 135	490, 220	658	82, 750	1, 440	108, 848	2, 615, 621	203, 077	929, 903	3, 748, 601	681, 818
Arkansas	8, 981	7, 368	237, 491	1, 314	84, 760	299	20, 615	1, 818, 356	327, 600	178, 235	2, 324, 191	342, 866
Missouri	14, 110	10, 010	232, 544	450	26, 320	3, 650	489, 066	2, 719, 537	177, 840	3, 056, 944	5, 954, 321	747, 930
Tennessee	6, 133	4, 750	70, 723	155	14, 500	1, 228	149, 459	1, 004, 104	96, 720	1, 278, 498	2, 379, 322	234, 682
Kentucky	7, 493	5, 208	96, 416	1, 038	47, 400	1, 247	134, 601	1, 333, 072	434, 382	1, 147, 961	2, 915, 415	278, 417
Ohio	11, 760	6, 430	151, 086	280	13, 800	5, 056	845, 962	2, 227, 668	103, 771	5, 245, 662	7, 577, 101	1, 010, 848
Indiana	7, 682	4, 722	80, 067	....	....	2, 960	323, 587	1, 138, 748	....	3, 192, 246	4, 330, 994	403, 654
Illinois	11, 673	5, 232	106, 504	....	....	6, 441	843, 835	1, 502, 255	....	7, 401, 848	8, 904, 103	959, 429
Michigan	9, 222	4, 854	113, 609	997	26, 765	3, 371	264, 930	1, 300, 005	105, 309	2, 963, 730	4, 548, 194	403, 600
Wisconsin	8, 597	6, 015	109, 164	184	2, 170	2, 384	241, 315	1, 650, 203	35, 737	2, 387, 015	4, 079, 065	352, 649
Iowa	9, 700	6, 964	124, 900	....	....	3, 410	316, 805	1, 750, 073	....	2, 606, 847	4, 440, 980	441, [illegible]
Minnesota	7, [illegible]	5, 470	115, 692	....	....	2, 158	150, [illegible]	1, 296, 870	....	1, 690, 435	2, 917, 111	466, [illegible]
Nebraska	4, [illegible]	[illegible]	65, 018	....	....	1, 401	[illegible]	730, [illegible]	....	1, [illegible]	2, 517, 465	416, [illegible]

						3,310	801,066	1,070,098		1,071,525	3,351,153	421,836
[illegible]	2,207	2,135	187,795			52	3,741	803,018		32,292	835,310	191,536
California	11,440	8,282	564,022	1,481	62,000	1,677	271,664	2,631,243	200,544	1,358,335	4,190,122	897,686
Oregon	2,676	2,434	70,742	242	31,000			396,280	199,480		595,760	101,742
Washington Territory	3,384	1,409	108,678	1,868	62,676	107	5,330	307,840	107,232	66,518	481,590	176,684
Idaho Territory	1,303	1,303	109,739					382,174			382,174	109,739
Montana Territory	1,400	1,400	123,672					518,560			518,560	123,672
Dakota Territory	1,456	1,395	30,449			61	4,611	284,115		38,364	322,479	35,060
Wyoming Territory	183	183	11,905					41,496			41,496	11,905
Utah Territory	3,085	2,968	369,017			117	6,945	1,460,298		81,541	1,541,839	375,962
Colorado Territory	2,617	2,371	183,905			246	15,465	785,819		174,645	960,464	199,370
New Mexico Territory	2,052	2,052	329,817					717,308			717,308	329,817
Arizona Territory	2,030	2,030	109,477					309,088			309,088	109,477
Total	269,097	182,994	5,973,390	18,369	839,004	67,734	8,589,663	52,088,206	4,078,725	72,460,545	128,627,476	15,402,057
Estimated increase of cost by re-adjustment of pay on railroad routes from which returns were not received up to June 30, 1874, under act of March 3, 1873							523,527					523,527
Railway post-office clerks												1,058,200
Route-agents												896,680
Mail-route messengers												136,540
Local agents												94,710
Mail-messengers												595,772
Aggregate							9,113,190					18,707,486

JOHN L. ROUTT,
Second Assistant Postmaster-General.

B.—*Railroad service as in operation on the 30th of June, 1874.*

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	MAINE.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
1	Augusta to Skowhegan	Maine Central	22		18	4,610 00		140 00	
			17		6			90 00	
2	Portland to Bangor	do	73.28		6	25,199 00		175 00	
			55		6			225 00	
3	Newport to Dexter	do	14		12	840 00		50 00	$140 per annum included for mail-messenger service.
4	Calais to Princeton	Saint Croix and Penobscot	21		6	2,100 00		50 00	$1,050 per annum included for mail-messenger service.
5	Portland to Augusta	Maine Central	64			14,520 00		210 00	12 times a week, 7 months, 6 times a week 5 months.
	Branch to Bath		9		6			120 00	
6	Portland to Canada Line	Grand Trunk	92		12	22,770 00		138 00	
			73		6				
7	Portland to Rochester, N. H	Portland and Rochester	52		12	3,800 00		65 00	$420 per annum included for mail-messenger service.
8	Mechanic's Falls to Canton	Portland and Oxford Central	27.5		6	1,246 57		45 33	Old rate of pay.
9	Bangor to Vanceborough	Consolidated European and North American.	118.25		6	20,693 75		175 00	
10	Old Town to Guilford	do	48.1		6	2,645 50		55 00	
11	Belfast to Burnham Village	Maine Central	34.19		12	1,846 20		54 00	
12	Portland to Bartlett, N. H	Portland and Ogdensburgh	72.855		12	4,371 30		60 00	
13	Bath to Rockland	Knox and Lincoln	50		12	6,000 00		100 00	$1,000 per annum included for ferriage.
14	Houlton to New Brunswick line	New Brunswick and Canada	3		6	150 00		50 00	Old rate of pay.
34	Farmington to Brunswick	Maine Central	71.5		6	5,412 50		75 00	$50 per annum included for mail-messenger service at Lisbon.
124	Portland to Portsmouth, N. H	Eastern	52		18	14,716 00		283 00	
221	Salmon Falls, N. H., to Portland, Me.	Boston and Maine	44.18		12	4,859 80		110 00	
231	West Waterville to Norridgewock	Somerset	13.31		6	665 50		50 00	Pay estimated.
				1,027.165			136,446 12		
	NEW HAMPSHIRE.								
951	Concord to Nashua	Concord	36		18	8,100 00		225 00	
959	Concord to Wells River, Vt	Boston, Concord, and Montreal	72		12	13,100 00		125 00	$1,410 per annum included for mail-messenger service.
			69		12				

	...tion, Vt.	Northern New Hampshire	69		12	14,910 00		190 00	$1,150 per annum included for mail-messenger service.
	Branch to Bristol		13		6			50 00	
254	Concord to Claremont Junction	Concord and Claremont	54.90		12	6,998 80		120 00	$400 per annum included for mail-messenger service.
255	Concord to Portsmouth	Concord	60		12	3,600 00		60 00	
256	Manchester to North Weare	do	20.5		6	1,025 00		50 00	
257	Nashua to Greenfield	Boston and Lowell and Nashua and Lowell.	27		12	1,755 00		65 00	
258	Contoocook Village to Hillsborough Bridge.	Contoocook River	15		6	750 00		50 00	
259	Dover to Alton Bay	Boston and Maine	28		6	1,400 00		50 00	
260	Brock's Crossing to North Conway.	Portsmouth, Great Falls, and Conway.	6		12	4,256 60		60 00	
			64.11		6				
261	Groveton to Wells River, Vt	Boston, Concord and Montreal	10		18	4,860 00		90 00	
			22		6				
			22		12				
262	Hooksett to Pittsfield	Suncook Valley	20			1,000 00		50 00	12 times a week 8 months, 9 times a week 4 months.
351	Wolfborough Junction to Wolfborough.	Eastern	12.11		6	363 30		30 00	
352	Nashua to Acton, Mass	Nashua, Acton and Boston	23.44		6	1,172 00		50 00	Pay estimated.
359	Wing Road to Twin Mountain	Boston, Concord and Montreal	9.49		6	474 50		50 00	Do.
360	Portsmouth to Dover	Eastern	11.64		6	582 00		50 00	Do.
				618.28			64,407 20		
	VERMONT.								
401	Burlington to Rouse's Point, N. Y.	Central Vermont	24.5		15	9,802 50		185 00	
			31		6			170 00	
402	White River Junction to Derby Line.	Connecticut and Passumpsic Rivers and Massawippi Valley.	114.87		6	21,538 11		175 00	$1,435.87 per annum included for railway post-office car.
403	Windsor to Burlington	Central Vermont	93		15	22,577 00		193 00	
			26		15			178 00	
405	Bellows Falls to Windsor	do	25		12	5,125 00		205 00	
406	Bellows Falls to Burlington	do	52		6	20,449 00		157 00	
			67.5		18			182 00	
407	Brattleborough to Bellows Falls	do	24		12	4,920 00		205 00	
408	Saint Albans to Canada line	do	17		6	1,445 00		85 00	
409	Saint Albans to Richford	do	28.66		6	2,149 50		75 00	
410	West Concord to Hyde Park	Portland and Ogdensburgh	58.93		6	7,366 25		125 00	
522	Richford to Newport	Central Vermont	31.38		6	3,138 00		100 00	
525	Leicester Junction to Ticonderoga Station.	do	14.5		6	1,450 00		100 00	
528	Wells River to Montpelier	Montpelier and Wells River	38.62		6	1,931 00		50 00	Pay estimated.
				647 96			100,455 49		
	MASSACHUSETTS.								
601	Boston to Portsmouth, N. H	Eastern	56.5		24	16,667 50		295 00	
602	Boston to South Berwick Junction, Me.	Boston and Maine	75		11	13,050 00		172 00	
	Branch to Great Falls, N. H.		3		12			50 00	

B.—*Railroad service as in operation on the 30th of June, 1874*—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	MASSACHUSETTS—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
603	Boston to Nashua, N. H	Boston and Lowell and Nashua and Lowell.	42		18	8,610 00		205 00	
604	Boston to Fitchburgh	Fitchburgh	52		18	11,440 00		220 00	
605	Boston to Albany, N. Y	Boston and Albany	101		26	109,123 00		680 00	
			102		13			396 50	
606	Boston to Woonsocket Falls, R. I	Boston, Hartford and Erie	39.68		15	2,640 80		60 00	$260 per annum included for mail-messenger service.
607	Boston to Southbridge	do	70		12	7,560 00		108 00	
608	Boston to Providence, R. I	Boston and Providence	23		24	4,400 00		100 00	
			21		12				
609	Boston to Plymouth	Old Colony	11.28		42	6,595 00		150 00	$895 per annum included for mail-messenger service.
			26.72		12				
610	Boston to Medford	Boston and Maine	5¼		12	275 00		50 00	
615	Boston to West Lynn Depot	Eastern	10		12	500 00		50 00	
616	Boston to Dedham	Boston and Providence	11		12	550 00		50 00	
617	Grafton Depot to Millbury	Boston and Albany	4		12	200 00		50 00	Pay estimated.
618	Salem to Gloucester	Eastern	16		18	1,072 00		67 00	
619	Salem to Marblehead	do	4		12	200 00		50 00	
620	Salem to Lawrence	do	20		6	800 00		40 00	
621	Georgetown to Haverhill	Boston and Maine	6.5		12	325 00		50 00	
622	Lawrence to Manchester, N. H	Manchester and Lawrence	28		18	4,564 00		163 00	
623	Lowell to Lawrence	Boston and Lowell and Nashua and Lowell.	14		21	1,050 00		50 00	$350 per annum included for mail-messenger service.
624	Winchester to Woburn	do	3		12	150 00		50 00	
625	Porter's Station to Concord	do	15.96		12	798 00		50 00	
626	South Acton Depot to Hudson	Fitchburgh	9		12	500 00		50 00	$50 per annum included for mail-messenger service.
627	Ayer to Lowell	Boston and Lowell and Nashua and Lowell.	17		15	850 00		50 00	
628	Ayer to Greenville	Fitchburgh	23		12	1,437 50		62 50	
629	Auburndale Station to Newton Lower Falls.	Boston and Albany	2		6	100 00		50 00	
630	Natick to Saxonville	do	4		12	200 00		50 00	
631	South Framingham to Pratt's Junction.	Boston, Clinton and Fitchburgh	29		18	2,610 00		90 00	
632	South Framingham to Milford	Boston and Albany	13		24	1,080 00		80 00	$300 per annum included for mail-messenger service.

634	South Braintree Junction to Newport, R. I.	Old Colony	4		12	250 00	50 00	$50 per annum included for mail-messenger service.
635	South Abington to Bridgewater	do	61. 75		12	4, 202 75	53 00	$930 per annum included for mail-messenger service.
636	Braintree Depot to Cohasset	South Shore	7. 75		6	390 00	40 00	$80 per annum included for mail-messenger service.
637	Middleborough to Hyannis	Old Colony	12		12	1, 400 00	58 00	$704 per annum included for mail-messenger service.
638	Yarmouthport to Provincetown	do	47		12	8, 191 00	153 00	$1,000 per annum included for mail-messenger service.
639	New Bedford to West Wareham	New Bedford	60. 51		12	11, 140 18	118 00	$4,000 per annum included for mail-messenger service.
640	Taunton to Middleborough	Old Colony	16. 25		12	1, 093 75	50 00	$281.25 per annum included for mail-messenger service.
641	Taunton to Mansfield Junction	Taunton Branch	10. 54		30	527 00	50 00	
642	Taunton to New Bedford	New Bedford	12		36½	1, 800 00	100 00	$600 per annum included for mail-messenger service.
643	Worcester to Nashua, N. H.	Worcester and Nashua	20. 5		27	2, 457 50	90 00	$612.50 per annum included for mail-messenger service.
644	Sterling Junction to Fitchburgh	Boston, Clinton and Fitchburgh	46. 25		18	4, 948 75	107 00	
645	Fitchburgh to Bellows Falls, Vt.	Cheshire	14		18	1, 260 00	90 00	
646	Fitchburgh to Hoosac Tunnel Branch to Turner's Falls	Fitchburgh	64		18	10, 240 00	160 00	
			69		6		170 00	
			18		6	14, 860 00	160 00	
			5		6		50 00	
647	Palmer to Miller's Falls	Central Vermont	35		12	3, 500 00	100 00	
648	Springfield to South Vernon Junction, Vt. Branch to Chicopee	Connecticut River	50		15	11, 800 00	230 00	$300 per annum included for mail-messenger service.
649	South Vernon Junction, Vt., to Keene, N. H.	Cheshire	24		12	1, 500 00	62 50	
650	Pittsfield to North Adams	Boston and Albany	21		18	1, 575 00	60 00	$315 per annum included for mail-messenger service.
651	Gloucester to Pigeon Cove	Eastern	6. 5		12	450 00	50 00	$125 per annum included for mail-messenger service.
652	Wakefield to Newburyport	Boston and Maine	30. 5		12	1, 525 00	50 00	
653	South Braintree Junction to Fall River.	Old Colony	34		6	6, 372 00	158 00	$1,000 per annum included for mail-messenger service.
654	East Salisbury to Amesbury	Eastern	4		12	250 00	50 00	$50 per annum included for mail-messenger service.
655	Palmer to Winchendon	Boston and Albany	15. 75		24			
			7. 96		18	2, 462 50	50 00	
			25. 54		12			
656	Mansfield to South Framingham	Boston, Clinton and Fitchburgh	22		6	1, 320 00	60 00	
657	Winchendon to Peterborough	Monadnock	16		6	800 00	50 00	
658	Springfield to Athol Depot	Springfield, Athol and Northeastern.	52. 465		6	2, 623 25	50 00	Pay estimated.
659	South Framingham to Lowell	Boston, Clinton and Fitchburgh	29		12	1, 798 00	62 00	
660	Worcester to Winchendon	Boston, Barre and Gardner	37		12	3, 237 50	87 50	
661	Holyoke to Westfield	New Haven and Northampton	10. 53		12	526 50	50 00	
662	Milford to Bellingham Junction	Providence and Worcester	5		12	250 00	50 00	
736	Milford to Ashland	Hopkinton	11. 68		6	584 00	50 00	

B.—*Railroad service as in operation on the 30th of June*, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	MASSACHUSETTS—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
737	Cohassett Narrows to Wood's Hole	Old Colony	17.67		6	1,311 51		53 00	$375 per annum included for mail-messenger service.
741	Wenham to Essex	Eastern	5.55		6	277 50		50 00	Pay estimated.
742	Lynn to Marblehead	do	6.05		6	302 50		50 00	Do.
743	Wakefield to Peabody	do	8.54		6	427 00		50 00	Do.
744	Miller's Falls to Brattleborough, Vt	Central Vermont	21		18	3,937 50		187 50	Do.
				1,822.425			306,878 49		
	RHODE ISLAND.								
801	Providence to Worcester, Mass	Providence and Worcester	44		18	6,340 00		110 00	$1,500 per annum included for mail-messenger service.
802	Providence to New London, Conn	Stonington and Providence	63.75		22½	9,243 75		145 00	
803	Providence to Bristol	Providence, Warren and Bristol	14.6		12	1,926 00		60 00	$1,050 per annum included for mail-messenger service.
804	Warren to Fall River	Fall River, Warren and Providence	7		12	420 00		60 00	
823	Providence to Pascoag	Providence and Springfield	23.12		6	1,156 00		50 00	Pay estimated.
				152.47			19,085 75		
	CONNECTICUT.								
901	Norwich to Worcester, Mass	Boston, Hartford and Erie	60		12	5,100 00		85 00	
902	New London to Palmer, Mass	Central Vermont	30 35		23 18	7,800 00		120 00	
903	Middletown to Berlin Depot	New York, New Haven and Hartford.	10		18	1,000 00		100 00	Old rate of pay.
904	New Haven to New London	do	50		23	7,567 00		150 00	Old rate of pay. $67 per annum included for mail-messenger service.
905	New Haven to Springfield, Mass	do	63.833		31	20,745 83		325 00	Old rate of pay.
906	New Haven to Williamsburgh, Mass.	New Haven and Northampton	85.48		12	14,504 80		160 00	
907	Branch to New Hartford, Conn		16.56		12			50 00	
	New Haven to New York, N. Y	New York, New Haven and Hartford.	70.333		31	28,025 00		375 00	
908	Bridgeport to Winsted	Naugatuck	62		12	6,397 50		85 00	$150 per annum included for mail-messenger service; also, $60 per annum for sec-ondarily line route-agents.
	Branch to Watertown		5.75		6			50 00	

909	Bridgeport to Pittsfield, Mass.	Housatonic	110		12		90 00	
	Branch to State Line		11		6	11,275 00	50 00	
	Branch to Brookfield Junction		5.5		6		30 00	
910	South Norwalk to Danbury	Danbury and Norwalk	21.5		24		110 00	
	Branch to Ridgefield		4		12	3,085 00	50 00	
	Branch to Hawleyville		6.01		12		50 00	
911	Waterbury to Providence, R. I.	Hartford, Providence and Fishkill	122.5		22¾	9,800 00	80 00	
912	Vernon Depot to Rockville	do	4.625		18	500 00	50 00	$268.50 per annum included for mail-messenger service.
	Branch to Vernon							
913	New Haven to Willimantic	New Haven, Middletown and Willimantic.	24		12	2,600 00	50 00	
			32		6			
914	Hartford to New Saybrook	Connecticut Valley	43.16		1½	2,589 60	60 00	
915	New Haven to Ansonia	New Haven and Derby	13.5		12	742 50	55 00	
916	Hartford to Millerton, N. Y.	Connecticut Western	68		9½	3,459 00	50 00	
917	Litchfield to Hawleyville	Shepaug	32.25		12	1,935 00	60 00	
975	East Thompson to Willimantic	Boston, Hartford and Erie	33.68		6	2,116 80	60 00	$96 per annum included for mail-messenger service.
				1,028.681		129,973 03		

NEW YORK.

1201	New York to Dunkirk	Erie	66		25½	323,595 00	705 00	
			393		19¼			
1202	Suffern to Piermont	do	18		6	900 00	50 00	
1203	Buffalo to Suspension Bridge	do	25.94		13	1,686 10	65 00	
1204	Newburgh to Chester	do	19.75		12	1,921 25	65 00	
	Branch, Vail's Gate to junction with main stem.		12.75		12		50 00	
1205	Rochester to Avon	do	18		12	1,440 00	80 00	
1206	Avon to Dansville	do	30.73		12	1,843 80	60 00	
1207	Attica to Corning	do	111		19½	30,525 00	275 00	
1208	Buffalo to Hornellsville	do	91		22½	32,987 50	362 50	
1209	Goshen to Montgomery	do	10.25		6	512 50	50 00	
1210	Goshen to Pine Island	do	11		6	440 00	40 00	
1211	New York to Troy	New York Central and Hudson River.	150		25	56,250 00	375 00	Old rate of pay.
1212	Troy to Schenectady	do	22		18	1,650 00	75 00	Do.
1213	Syracuse to Rochester	do	104		12	13,000 00	125 00	Do.
1214	Canandaigua to Niagara Falls	do	97		12	4,850 00	50 00	Do.
1215	Buffalo to Lockport	do	22		12	1,100 00	50 00	Do.
1216	Buffalo to Lewiston	do	29		12	2,175 00	75 00	Do.
1217	Albany to Buffalo	do	298		25	111,750 00	375 00	Do.
1218	Rochester to Niagara Falls	do	76		12	19,000 00	250 00	Do.
1219	New York to Chatham Village	New York and Harlem	130.5		6	13,050 00	100 00	Do.
1220	Saratoga Springs to Castleton, Vt	Rensselaer and Saratoga	54		12	8,100 00	150 00	Do.
1221	Eagle Bridge to Rutland, Vt	do	65.5		12	9,375 00	150 00	Do.
1222	Troy to Saratoga Springs	do	32.81		12	4,921 50	150 00	Do.
1223	Schenectady to Ballston	do	16		12	800 00	50 00	Do.
1224	Albany to Albany Junction	do	12		18	1,029 00	85 73	Do.
1225	Oswego to Richland	Rome, Watertown and Ogdensburgh.	28.5		12	1,852 50	65 00	
1226	Watertown to Cape Vincent	do	26		12	1,625 00	62 50	

B.—*Railroad service as in operation on the 30th of June*, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	NEW YORK—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
1227	Rome to Ogdensburgh Branch, De Kalb Junction to Potsdam Junction.	Rome, Watertown and Ogdensburgh.	72.62 69.38 25		18 12 6	21,158 50		138 00 138 00 62 50	
1228	Chenango Forks to Norwich	Delaware, Lackawanna and Western.	30.69		12	1,841 40		60 00	
1229	Utica to Norwich	do	54.5		12	4,360 00		80 00	
1230	Oswego to Ithaca	do	35		12	2,800 00		80 00	
1231	Cassville Junction to Richfield Springs.	do	21		12	1,155 00		55 00	
1232	Mineola to Locust Valley	Long Island	12.25		12	612 50		50 00	
1233	New York to Greenport Branch, Mineola to Hempstead.	do	32 35 31 2.5		12 9 6 12	11,045 00		90,00	$2,000 per annum included for mail-messenger service in New York.
1234	Hicksville to Northport	do	16.5		12	825 00		50 00	
1235	Oswego to Middletown Branch, Summittville Junction to Ellenville.	New York and Oswego Midland	249.98 8		12 6	12,899 00		50 00	Old rate of pay.
1236	Sidney Plains to New Berlin	do	24.84		6	1,242 00		50 00	Do.
1238	Norwich to Cortland Village	do	49.21		6	2,460 50		50 00	Do.
1239	Clinton to Rome	do	13.75		12	687 50		50 00	Do.
1240	Walton to Delhi	do	16		12	800 00		50 00	Do.
1241	Buffalo to Chicago, Ill	Lake Shore and Michigan Southern.	169 15.5 135.2 222.3		26 28 38 12	283,833 50		540 00 540 00 565 00 485 00	
1242	Rouse's Point to Ogdensburgh	Central Vermont	119		9	14,875 00		125 00	
1243	Plattsburgh to Canada line	New York and Canada	23		12	1,150 00		50 00	
1244	Cobleskill to Cherry Valley	Delaware and Hudson Canal	22.47		12	1,123 50		50 00	
1245	Albany to Binghamton	do	142		18	14,200 00		100 00	
1246	Schoharie to Middleburgh	Middleburgh and Schoharie	5.5		12	395 00		50 00	Old rate of pay; $120 per annum included for side service.
1247	Central Bridge to Schoharie	Schoharie Valley	5		18	400 00		80 00	Old rate of pay.
1248	Utica to Smith's Valley Station	New York and Oswego Midland	31.4		6	1,570 00		50 00	Do.

		phia.						
1250	Fredonia to Dunkirk Station	Dunkirk and Fredonia	123.51		6	7,410 50	60 00	
1251	Skaneateles Junction to Skaneateles.	Skaneateles	3.5 5.5		27 12	500 00 560 00	142 85 50 00	
1252	Brocton to Corry, Pa	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh.	45.3		6	3,000 90	53 00	$285 per annum included for mail-messenger service. $600 per annum included for side service.
1253	Chesterville to Warwick	Warwick Valley	11		12	550 00	50 00	Old rate of pay.
1254	Suspension Bridge to Detroit, Mich	Great Western Railroad Company of Canada.	229		25	11,450 00	50 00	Do.
1255	Canandaigua to Elmira	Northern Central	68.5		12	10,275 00	150 00	Do.
1256	Syracuse to Oswego	Oswego and Syracuse	35.5		18	3,550 00	100 00	
1257	Syracuse to Binghamton	Syracuse, Binghamton and New York.	80		12	7,200 00	90 00	
1258	Rouse's Point to Canada line	Champlain and Saint Lawrence	2.25		6	262 50	116 66	
1259	Troy to North Adams, Mass. Branch, Hoosick Junction to State line, Mass.	Troy and Boston	23.2 26.8 5.5		24 18 6	6,937 50	125 00	
1260	Stapleton to Tottenville	Staten Island	21		12	1,800 00	50 00	$750 per annum included for side service.
1261	Hudson to West Stockbridge, Mass	Hudson and Boston	35		12	1,750 00	50 00	Old rate of pay.
1262	East Gainesville to Perry	Rochester and Pine Creek	6.55		12	327 50	50 00	
1263	Port Henry to Ticonderoga Station	New York and Canada	17		6	1,062 50	62 50	
1264	Syracuse to Earlville	Syracuse and Chenango	20 22.47		12 6	2,123 50	50 00	
1265	Dunkirk to Titusville, Pa	New York Central and Hudson River.	91.16		6	4,558 00	50 00	
1266	Ithaca to State Line	Ithaca and Athens	34.6		6	1,730 00	50 00	
1267	Syracuse to Lacona	Syracuse Northern	44.92		12	2,470 60	55 00	
1268	Rondout to Stamford	New York, Kingston and Syracuse	73.3		12	3,665 00	50 00	
1269	Ithaca to Cortland Village	Utica, Ithaca and Elmira	23		12	1,495 00	65 00	
1270	Port Jervis to Monticello	Monticello and Port Jervis	24		6	1,200 00	50 00	
1271	Poughkeepsie to State Line	Poughkeepsie and Eastern	43.15		6	2,157 50	50 00	Old rate of pay.
1272	Canastota to Cazenovia	Cazenovia, De Ruyter and Canastota.	15		18	750 00	50 00	
1273	Fonda to Gloversville	Fonda, Johnstown and Gloversville.	10		12	1,390 00	64 00	$750 per annum included for side service.
1274	Johnsonville to Greenwich	Greenwich and Johnsonville	14		12	600 00	42 85	Old rate of pay.
1275	Montgomery to Kingston	Wallkill Valley	33.46		6	1,003 80	30 00	Do.
1276	Athens to Fair Haven	Southern Central	122		6	7,920 00	60 00	$500 per annum included for side service.
1277	Newburgh to Millerton Branch, Clove Branch Junction to Sylvan Lake.	Dutchess and Columbia	56.5 4.5		6 6	3,050 00	50 00	
1278	Cooperstown to Cooperstown Junction.	Cooperstown and Susquehanna Valley.	16		12	1,000 00	62 50	
1279	Chatham Village to Rutland, Vt. Branch, North Bennington to State Line.	Central Vermont	111.30 2		6 6	14,032 50	125 00 60 00	
1280	Plattsburgh to Au Sable Forks	New York and Canada	23		6	1,150 00	50 00	
1281	New York to Manhasset	Flushing and North Side	13 8.75		12 6	2,400 00	110 55	Old rate of pay.

B.—*Railroad service as in operation on the 30th of June*, 1874—Continued.

Number of route	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	NEW YORK—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
1282	New York to Patchogue	South Side	55		12	3,400 00		50 00	$550 per annum included for side service; also $100 per annum for supply of Bellport and Fireplace.
1283	Utica to Watertown	Utica and Black River	92.22		12	5,994 30		65 00	
1284	Cayuga to Ithaca	Cayuga Lake	38.05		6	1,902 50		50 00	
1285	Sodus Point to Gorham Station	Sodus Point and Southern	34		6	1,700 00		50 00	
1286	Horseheads to Van Ettenville	Utica, Ithaca and Elmira	19.89		6	994 50		50 00	Pay estimated.
1287	Oswego to Ontario	Lake Ontario Shore	51.81		6	2,590 50		50 00	
1288	Carthage to Clayton	Utica and Black River	18 18.75		12 6	1,837 50		50 00	
1289	Freeville to Scipio	Utica, Ithaca and Elmira	28.82		6	1,441 00		50 00	
1290	Buffalo to Gowanda	Buffalo and Jamestown	34.25		6	1,712 50		50 00	
1291	Golden's Bridge to Mahopac	New York and Harlem	7.5		6	375 00		50 00	Old rate of pay.
1292	Crawford Junction to Pine Bush	New York and Oswego Midland	10.18		6	509 00		50 00	Pay estimated.
1293	Ithaca to Geneva	Geneva and Ithaca	40.25		6	2,012 50		50 00	Do.
				5,651.26			1,159,514 25		
	NEW JERSEY.								
2101	New York to Easton, Pa	Central Railroad Company of New Jersey.	74		19	22,200 00		300 00	
2102	Somerville to Flemington	do	16.06		6	690 00		43 00	
2103	New York to New Brunswick	Pennsylvania	36		65½	20,412 00		567 00	
2104	New Brunswick to Philadelphia, Pa	do	54		84½	30,132 00		558 00	
2105	Philadelphia, Pa., to South Amboy, N. J. Branch, Bordentown to Trenton	do	66 6		88 88	4,260 00		60 00 50 00	
2106	New York to Easton, Pa	Morris and Essex	63 24.47		12 6	7,530 00		100 00 50 00	Old rate of pay.
2107	Camden to Atlantic City	Camden and Atlantic	60		12	3,000 00		50 00	Do.
2108	New York to Nyack	Northern Railroad Company of New Jersey.	30		6	2,158 00		50 00	$658 per annum included for side service.
2109	Philadelphia, Pa., to Rightstown, N. J. Branch, Burlington to Mt Holly	Pennsylvania	25 27.50 7		12 6 6	3,725 00		75 00 40 00 50 00	$400 per annum included for mail-messenger service in Philadelphia.

2110	Philadelphia, Pa., to Bridgeton, N. J	West Jersey	18 20.4		18 12	4,824 00		110 00	$6000 per annum included for mail-messenger service in Philadelphia.
2111	Glassborough to Millville	do	22		12	2,200 00		100 00	
2112	Millville to Cape May	do	41		12	3,075 00		75 00	
2113	Elmer to Salem	do	16.6		12	1,000 00		60 24	
2114	Mount Holly to Medford	Pennsylvania	6.5		12	325 00		50 00	
2115	Jamesburgh to Squam Village	Freehold, Jamesburgh and Agricultural.	27		12	1,892 14		66 37	$100 per annum included for side service at Englishtown.
2116	Trenton to Belvidere	Pennsylvania	68.7		20¼	5,496 00		80 00	
2117	Lambertville to Flemington	do	12.13		12	606 50		50 00	
2118	Greensborough Station to Pennington.	do	5.6		12	280 00		50 00	
2119	New York to New Bridge	Erie	16.5		6	825 00		50 00	
2120	New Bridge to Nanuet Junction	do	13.25		6	662 50		50 00	
2121	Waterloo to Franklin Furnace. Branch, La Fayette Junction to Branchville.	Sussex	12 12.76 6.24		12 6 6	1,650 00		50 00	$100 per annum included for side service on branch.
2122	New York to Denville	Delaware, Lackawanna and Western.	35.93		12	1,796 50		50 00	Old rate of pay.
2123	Dover to Chester	Morris and Essex	10		6	500 00		50 00	Do.
2124	Newark to Mont Clair	Newark and Bloomfield	5.67		12	275 00		48 60	Do.
2125	Rocky Hill to Monmouth Junction	Pennsylvania	8		6	400 00		50 00	
2126	Sandy Hook to Pemberton Junction. Branch, Eatontown to Port Monmouth. Branch, Manchester to Barnegat Junction.	New Jersey Southern	41.2 23.9 9.8 20.3		12 6 12 12	6,387 50		75 00 75 00 50 00 50 00	Do.
2127	Whiting to Atco	do	33.3		6	1,665 00		50 00	Do.
2128	Newark to Paterson	Erie	13.12		6	656 00		50 00	
2129	Atsion to Greenwich	Vineland	44.25		6	1,770 00		40 00	Old rate of pay.
2130	Whiting to Long Beach	Tuckerton	29.56		6	1,584 25		50 00	$106.25 additional for three months' service on 8½ miles.
2131	Kinkora to New Lisbon	Pennsylvania	14.41		6	576 40		40 00	
2133	Bridgeton to Port Norris	Bridgeton and Port Norris	20.24		6	1,257 20		30 00	$650 per annum included for side service.
2134	Egg Harbor City to May's Landing	Camden and Atlantic	7.43		12	371 50		50 00	Old rate of pay.
2135	Jersey City to Ringwood Furnace.	New York and Oswego Midland	35.9		6	1,795 00		50 00	Pay estimated.
2136	Atco to Williamstown	Williamstown	9		6	270 00		30 00	Old rate of pay.
2149	Summit to Bernardsville	New Jersey West Line	14.6		6	730 00		50 00	Do.
2209	Woodbury to Swedesborough	West Jersey	11		6	550 00		50 00	
2254	New York to Middletown	New Jersey Midland	68		6	7,304 00		83 00	
				1,263.32			144,821 49		
	PENNSYLVANIA.								
2401	Philadelphia to Pittsburgh	Pennsylvania	353.6		40⅜	154,876 80		438 60	
2402	Philadelphia to Pottsville	Philadelphia and Reading	92.5		14¼	11,562 50		125 00	
2403	Philadelphia to West Chester	West Chester and Philadelphia	26.13		18	2,062 50		75 00	$102.75 per annum included for side service.

B.—*Railroad service as in operation on the 30th of June, 1874*—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	PENNSYLVANIA—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
2404	Philadelphia to Bethlehem ..... Branch, Lansdale to Doylestown	North Pennsylvania	54.6	.....	45½	6,496 00	.....	110 00	
			9.8	.....	18			50 00	
2405	Philadelphia to Norristown	Philadelphia and Reading	16.24	.....	12	891 55	.....	55 00	
2406	Philadelphia to Darby	Philadelphia and Darby	5	.....	6	500 00	.....	100 00	
2407	Bridgeport to Downington	Philadelphia and Reading	21.48	.....	6	644 40	.....	30 00	
2408	Chester to Port Deposit, Md	Philadelphia and Baltimore Central	59.25	.....	12	3,555 00	.....	60 00	
2409	Honesdale to Lackawaxen	Erie	25	.....	12	1,500 00	.....	60 00	
2410	Allentown to Waverly	Lehigh Valley	55	.....	10	20,890 00	.....	115 00	
			105	.....	10			105 00	
			29.5	.....	10			120 00	
2411	Penn Haven Junction to Mount Carmel.	.....do	50	.....	9½	2,500 00	.....	50 00	
2412	Penn Haven Junction to Audenried	.....do	17.05	.....	12	1,312 50	.....	75 00	
2413	Pottsville to Herndon	Philadelphia and Reading	81.1	.....	10½	4,460 50	.....	55 00	
2414	Port Clinton to Williamsport	.....do	121.53	.....	7	7,291 80	.....	60 00	
2415	Sunbury to Tomhicken	Pennsylvania	44.1	.....	6	2,381 40	.....	54 00	
2416	Hazle Creek Bridge to Tomhicken	Lehigh Valley	13.8	.....	13	2,028 00	.....	85 00	
			11.4	.....	13			75 00	
2417	Scranton to Northumberland	Lackawanna and Bloomsburgh	80	.....	7.5	7,200 00	.....	90 00	
2418	Scranton to Carbondale	Delaware and Hudson Canal and Railroad Company.	17.11	.....	12	1,200 00	.....	50 00	$344 50 per annum included for mail-messenger service.
2419	Binghamton, N. Y., to New Hampton, N. J.	Delaware, Lackawanna and Western.	144.5	.....	9¾	12,282 50	.....	85 00	
2420	Bloomsburgh to Corning, N. Y ... Branch to Fall Brook ..... Branch to Morris Run ..... Branch to Arnot	Tioga	39.88	.....	12	3,713 00	.....	75 00	Old rate of pay.
			6.85	.....	12			50 00	
			3.8	.....	6			50 00	
			3.79	.....	6			50 00	
2421	Williamsport to Elmira	Northern Central	78	.....	12	13,650 00	.....	175 00	Do.
2422	Sunbury to Erie	Pennsylvania	39.8	.....	18	36,010 20	.....	195 00	
			247.8	.....	18			114 00	
2423	Sunbury to Mount Carmel	.....do	28	.....	10	1,400 00	.....	50 00	
2424	Alton to Carrollton	Erie	25.5	.....	6	1,020 00	.....	40 00	
2425	Irvine to Corry	Allegheny Valley	95	.....	12	6,365 00	.....	67 00	
2426	Strasburgh to Leaman Place	Herr and Company	4.25	.....	6	250 00	.....	58 82	
2427	Lancaster to Middletown	Pennsylvania	31.2	.....	15	2,184 00	.....	70 00	
2428	Harrisburgh to Auburn	Philadelphia and Reading	58.3	.....	7½	2,915 00	.....	50 00	
2429	New Castle to Homewood	Pittsburgh, Ft. Wayne and Chicago	15	.....	6	750 00	.....	50 00	

2430	Harrisburgh to Martinsburg, W. Va	Cumberland Valley	18.5 44.75 30.75		18 12 6	7,300 00			$100 per mile per annum on 52 miles. $50 per mile per annum on 42 miles.
2431	Columbia to Sinking Springs Branch Junction to Lancaster	Reading and Columbia	39.7 7.8		8⅞ 8⅞	2,375 00		50 00 50 00	
2432	York to Columbia	Pennsylvania	13.5		6	675 00		30 00	
2433	Hanover Junction to Frederick, Md.	Hanover Branch	50.4		7½	2,520 00		50 00	
2434	Hanover to Gettysburgh	Susquehanna, Gettysburgh and Potomac.	17.5		12	1,050 00		60 00	
2435	Huntingdon to Mount Dallas Station. Branch, Saxton to Dudley	Huntingdon and Broad-Top	44 6		6 6	3,000 00		60 00	
2436	Tyrone to Clearfield	Pennsylvania	40.6		12	2,639 00		65 00	
2437	Altoona to Martinsburgh Branch, Duncansville to Newry Branch, Martinsburgh to Henrietta.	do	22.3 3 6.7		10½ 6 6	1,600 00		50 00 50 00 50 00	
2438	Creason to Ebensburgh	do	11		12	550 00		50 00	
2439	Tyrone to Lock Haven Branch, Milesburgh to Bellefonte	do	55.1 2.7		12 12	3,605 75		62 50 60 00	
2440	Blairsville to Allegheny	do	63.7		9½	4,140 50		65 00	
2441	Washington to Wheeling, W. Va.	Hempfield	32		12	1,977 00		50 00	Old rate of pay; $377 per annum included for side service.
2442	Pittsburgh to Oil City	Allegheny Valley	132.71		18	13,271 00		100 00	
2443	Branch, Junction to Indiana	Pennsylvania	19		12	1,140 00		60 00	
2444	Meadville to Oil City	Atlantic and Great Western	36.25		9	2,265 62		62 50	
2445	Miles Grove to Newcastle	Erie and Pittsburgh	83		12	6,640 00		80 00	Old rate of pay.
2446	Oil City to Ashtabula, Ohio	Lake Shore and Michigan Southern	87.09		6	4,354 50		50 00	
2447	Bethlehem to Chapman's Quarries	Lehigh and Lackawanna	15		12	750 00		50 00	Do.
2448	Downingtown to Honey Brook	Pennsylvania	18		6	900 00		50 00	
2449	West Chester to Intersection	West Chester	9		5	250 00		27 77	Do.
2450	Lewistown Junction to Milroy	Pennsylvania	12.5		12	625 00		50 00	
2451	Pottsville to Frackville	Philadelphia and Reading	8.51		10⅝	425 50		50 00	
2452	Greenville to Harrisville	Shenango and Allegheny	33.5		6	2,010 00		60 00	
2453	Carlisle to Mountain Creek	South Mountain Iron Company	18		6	450 00		25 00	Do.
2454	Freeport to Butler	Pennsylvania	21.3		12	1,065 00		50 00	
2455	Wilmington, Del., to Birdsborough, Pa.	Wilmington and Reading	63.6		6	3,180 00		50 00	
2456	Pittsburgh to Washington	Pittsburgh, Cincinnati and Saint Louis.	22.8		12	1,482 00		65 00	
2457	Perkiomen Junction to Green Lane	Philadelphia and Reading	17.92		6⅛	806 40		45 00	
2458	Pottstown to Colebrookdale	do	13.05		6	522 00		40 00	
2459	Oleopolis to Pit-Hole City	Pit-Hole Valley	7		6	210 00		30 00	
2460	Lebanon to Tower City	Philadelphia and Reading	43.1		7½	1,724 00		40 00	
2461	Towanda to Bernice	Sullivan and Erie Coal and Railroad Company.	29.32		6	1,172 80		40 00	Do.
2462	Schuylkill to Glen Carbon	Philadelphia and Reading	13.2		12	528 00		40 00	
2463	Topton to Kutztown	do	4.36		9	218 00		50 00	

B.—*Railroad service as in operation on the 30th of June*, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	PENNSYLVANIA—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
2464	Pittsburgh to Cumberland, Md.	Pittsburgh and Connellsville	147.8		12	13,661 00		85 00	
	Branch, Broad Top to Mount Pleasant.		9		12			50 00	
	Branch, Connellsville to Uniontown.		12		12			54 00	
2465	Carbondale to Susquehanna	Erie	38.25		6	1,912 50		50 00	
2466	Lawrenceville to Antrim	Fall Brook Coal Company	37.1		12	2,442 50		65 84	Old rate of pay.
2467	Phœnixville to Eagle	Philadelphia and Reading	11.19		6	556 00		50 00	
2468	Lewisburgh to Mifflinburgh	Pennsylvania	10.7		6	535 00		40 00	
2469	Lewiston Junction to Sunbury	do	45		6	1,800 00		40 00	
2470	Union City to Titusville	Allegheny Valley	14.1		6	705 00		50 00	
2471	Towanda to Barclay	Towanda Coal Company	12		6	480 00		40 00	
2472	Shaff's Bridge to Somerset	Somerset and Mineral Point	9.1		12	655 00		50 60	$200 per annum included for mail-messenger service.
2474	Marion Junction to Richmond Furnace.	Cumberland Valley	19.13		6	1,072 00		50 00	
	Branch, Mercersburgh Junction to Mercersburgh.		2.31		6				
2475	Mount Dallas Station to Cumberland, Md.	Pennsylvania	47.6		6	2,380 00		50 00	
2476	Allentown to Harrisburgh	Philadelphia and Reading	90		21	20,880 00		232 00	
2477	Conshohocken to Flourtown	do	7.25		6	362 50		30 00	$145 per annum included for mail-messenger service.
2479	Easton to Allentown	Lehigh Valley	16.58		36	4,078 68		246 00	
2484	Lawrenceville to Elkland	Fall Brook Coal Company	13.8		12	690 00		50 00	
				3,871.91			439,524 90		
	DELAWARE.								
3401	Wilmington to Delmar	Philadelphia, Wilmington and Baltimore.	96.92		12	11,145 80		115 00	
3402	Delmar to Crisfield	Eastern Shore	38		6	2,470 00		65 00	
3403	Clayton to Easton, Md	Maryland and Delaware	44		6	2,310 00		52 50	
3404	Harrington to Lewes	Junction and Breakwater	40		6	2,000 00		50 00	
3405	Wilmington to Landenburgh	Wilmington and Western	19.53		6	781 20		40 00	
				278 45			18,707 00		

	MARYLAND.							
3501	Baltimore to Philadelphia, Pa.. / Branch, Perryville to Port Deposit.	Philadelphia, Wilmington and Baltimore.	100 / 4		283 / 6	44,200 00	440 00 / 50 00	
3502	Baltimore to Sunbury, Pa	Northern Central	140		18	22,560 00	204 00	
3503	Baltimore to Washington, D. C	Baltimore and Ohio	40		48	15,000 00	375 00	Old rate of pay.
3504	Washington, D. C., to Wheeling, W. Va.	do	353		18	100,605 00	285 00	Do.
3505	Araby to Frederick	do	3		18	300 00	100 00	Do.
3506	Weverton to Hagerstown	do	24.25		6	1,212 50	50 00	
3507	Baltimore to Williamsport	Western Maryland	85.5 / 6.12		12 / 12	6,718 50	75 00 / 50 00	Pay estimated.
3508	Annapolis to Annapolis Junction	Annapolis and Elk Ridge	20.5		12	1,537 50	75 00	Old rate of pay.
3509	Cambridge to Seaford, Del	Dorchester and Delaware	33.5		6	1,675 00	50 00	
3510	Salisbury to Berlin	Wicomico and Pocomoke	23		6	1,150 00	50 00	Do.
3511	Townsend, Del., to Centreville, Md	Queen Anne and Kent	36		6	1,800 00	50 00	Do.
3512	Cumberland to Piedmont, W. Va	Cumberland and Pennsylvania	34		6	1,700 00	50 00	
3513	Massey's Cross-Roads to Chestertown.	Kent County	19.55		6	1,466 25	75 00	Do.
3514	Baltimore to Washington, D. C	Baltimore and Potomac	42.6		6	4,260 00	100 00	
3515	Bowie to Pope's Creek	do	48.68		6	2,434 00	50 00	
3516	Newtown Junction to Newtown	Worcester and Somerset	9		6	450 00	50 00	Do.
3517	Berlin to Snow Hill	Worcester	14		6	700 00	50 00	Do.
3518	Saint Denis to Point of Rocks	Baltimore and Ohio	60		6	3,000 00	50 00	Do.
				1,096.7			216,768 75	
	WEST VIRGINIA.							
4101	Harper's Ferry to Harrisonburgh, Va.	Baltimore and Ohio	102.625		6	5,131 25	50 00	Do.
4102	Grafton to Parkersburgh	do	104		6	18,200 00	175 00	Do.
4189	Laurel Junction to Volcano	Laurel Fork and Sand Hill	8		6	320 00	40 00	
4293	Huntington to Hinton	Chesapeake and Ohio	150.42		6	9,777 30	65 00	
				365.045			33,428 55	
	VIRGINIA.							
4401	Game Point to Richmond	Richmond, Fredericksburgh and Potomac.	75.5		13	20,007 50	265 00	
4403	Alexandria to Lynchburgh .... / Branch to Warrenton	Orange, Alexandria and Manassas.	171 / 9		14 / 14	43,200 00	250 00 / 50 00	
4404	Alexandria to Hamilton	Washington and Ohio	45		6	2,250 00	50 00	
4405	Manassas to Strasburgh	Orange, Alexandria and Manassas	60		6	3,600 00	60 00	
4406	Richmond to Hinton, W. Va	Chesapeake and Ohio	272.58		6	24,532 00	90 00	
4407	Richmond to Greensborough, N. C.	Richmond and Danville	190.5		14	24,384 00	128 00	
4408	Richmond to West Point	Richmond and York River	40		6	2,000 00	50 00	
4409	Richmond to Petersburgh	Richmond and Petersburgh	24.2		14	5,050 00	200 00	Old rate of pay; $150 per annum included for mail-messenger service.
4410	Petersburgh to Weldon, N. C	Petersburgh	65.511		14	13,102 00	200 00	Old rate of pay.
4411	Petersburgh to City Point	Atlantic, Mississippi and Ohio	12		6	600 00	50 00	

B.—*Railroad service as in operation on the 30th of June*, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	VIRGINIA—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
4412	Petersburgh to Norfolk	Atlantic, Mississippi and Ohio	81.5		6	4,890 00		60 00	
4413	Petersburgh to Lynchburgh	do	123		6	7,995 00		65 00	
4414	Lynchburgh to Bristol, Tenn	do	205		14	49,200 00		240 00	
4415	Portsmouth to Weldon, N. C	Seaboard and Roanoke	80		6	6,000 00		75 00	Old rate of pay.
4701	Glade Spring to Saltville	Atlantic, Mississippi and Ohio	9.5		6	285 00		30 00	
				1,464.50			207,095 50		
	NORTH CAROLINA.								
5001	Raleigh to Weldon	Raleigh and Gaston	97		7	7,275 00		75 00	
5002	Weldon to Wilmington Branch, Rocky Mount to Tarborough.	Wilmington and Weldon	162.25 17		14 7	24,337 50 608 00		150 00 35.765	
5003	Wilmington to Wadesborough	Wilmington, Charlotte and Rutherford.	141		7	7,050 00		50 00	
5004	Goldsborough to Charlotte	Richmond and Danville	93 130		12 12	21,468 00		126 00 75 00	
5005	Goldsborough to Morehead City	Atlantic and North Carolina	95		7	5,225 00		55 00	
5006	Salisbury to Old Fort	Western North Carolina	114		6	5,700 00		50 00	
5007	Charlotte to Buffalo Paper Mills	Wilmington, Charlotte and Rutherford; Western Division.	52.5		6	2,625 00		50 00	
5213	Charlotte to Statesville	Atlantic, Tennessee and Ohio	48.51		6	1,936 00		40 00	
5216	Raleigh to Sanford	Raleigh and Augusta Air-Line	45.78		7	2,289 00		50 00	
5216	Sanford to Fayetteville	Western	38.15		7	1,907 50		50 00	
5216	Sanford to Egypt Depot	do	7		2	147 00		21 00	
5280	Greensborough to Salem	Northwestern North Carolina	29.31		6	1,465 50		50 00	
				1,670.5			82,033 50		
	SOUTH CAROLINA.								
5601	Charlotte, N. C., to Augusta, Ga	Charlotte, Columbia and Augusta	195		13	24,375 00		125 00	
5602	Columbia to Greenville C. H Branch, Hodges to Abbeville C. H.	Greenville and Columbia	143.5 11.5		6 6	11,400 00		75 00 30 00	
5604	Branch, Belton to Anderson C. H Columbia to Wilmington, N. C	Wilmington, Columbia and Augusta.	9.75 82.08 109.70		6 14 14	24,663 00		30 00 100 00 150 00	

5605	Branch, Kingsville to Camden	South Carolina	119		7	17,055 00		70 00	
	Branch, Kingsville to Columbia		37.5		7			50 00	
	Branch, Branchville to Charleston.		27		7			70 00	
			62		7			80 00	
5606	Charleston to Savannah, Ga	Savannah and Charleston	104		7	13,000 00		125 00	
5607	Charleston to Florence	Northeastern	104		13	13,000 00		125 00	
5608	Florence to Cheraw	Cheraw and Darlington	40		7	2,000 00		50 00	
5609	Chester C. H. to Yorkville	King's Mountain	23.5		6	1,175 00		50 00	
5610	Alston to Spartanburgh C. H	Spartanburgh and Union	68.75		6	3,437 50		50 00	
5611	Newberry C. H. to Laurens C. H	Joseph Crews	31.52		3	1,200 00		38 07	
5612	Anderson C. H. to Walhalla	Greenville and Columbia	34		6	1,020 00		30 00	
5707	Port Royal to Augusta, Ga	Port Royal	112.28		7	5,614 00		50 00	
				1,315.08			117,939 50		
	GEORGIA.								
6001	August to Atlanta	Georgia	171.666		13	21,458 33		125 00	
6002	Atlanta to Chattanooga, Tenn	Western and Atlantic	138		7	17,250 00		125 00	
6003	Atlanta to West Point	Atlanta and West Point	86.25		7	10,781 25		125 00	
6004	Millen to Augusta	Central Railroad and Banking Co.	53.125		14	6,640 62		125 00	
6005	Washington to Double Wells	Georgia	18.5		7	925 00		50 00	
6006	Union Point to Athens	do	41		7	3,315 00		75 00	
6007	Kingston to Rome	Rome	20.5		7	1,025 00		50 00	
6008	Savannah to Live Oak, Fla	Atlantic and Gulf	180.75		7	23,350 00		100 00	
	Branch, Lawton to Bainbridge.		105.5		7			50 00	
6009	Savannah to Macon	Central Railroad and Banking Co.	192.125		21	21,133 75		110 00	
6010	Macon to Columbus	Southwestern	100		13	7,500 00		75 00	
6011	Macon to Atlanta	Macon and Western	103		14	10,300 00		100 00	
6012	Macon to Brunswick	Macon and Brunswick	198		7	9,900 00		50 00	
6013	Gordon to Milledgeville	Central Railroad and Banking Co.	18.25		6	912 50		50 00	
6014	Eatonton to Milledgeville	do	22.125		6	1,106 00		50 00	
6015	Fort Valley to Eufaula, Ala	Southwestern	115.666		13	10,181 66		70 00	
	Branch, Renwick to Albany		22.5		7			50 00	
	Branch, Cuthbert to Fort Gaines		24		7			40 00	
6016	Thomasville to Albany	Atlantic and Gulf	58.333		7	2,916 00		50 00	
6017	Atlanta to Charlotte, N. C	Atlanta and Richmond Air-Line	266.5		7	18,655 00		70 00	
6018	Fort Valley to Perry	Southwestern	13.32		6	666 00		50 00	Pay estimated.
6143	Barnesville to Thomaston	Macon and Western	17.25		6	690 00		40 00	
6144	Cartersville to Rock Mart	Cherokee	22		6	660 00		30 00	
6145	Camac to Macon	Macon and Augusta	79		6	3,950 00		50 00	
6146	Griffin to Carrollton	Savannah, Griffin & North Alabama	61		6	1,830 00		30 00	
6191	Brunswick to Albany	Brunswick and Albany	171.25		6	5,137 50		30 00	
6231	Columbus to Hamilton	North and South	23.51		6	1,057 95		45 00	
				2,323.12			181,341 56		
	FLORIDA.								
6401	Fernandina to Cedar Keys	Atlantic, Gulf and West India Transit Company.	47.4		12	7,740 00		50 00	
			107.4		6			50 00	Old rate of pay.

B.—*Railroad service as in operation on the 30th of June*, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	VIRGINIA—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
4412	Petersburgh to Norfolk	Atlantic, Mississippi and Ohio	81.5		6	4,890 00		60 00	
4413	Petersburgh to Lynchburgh	do	123		6	7,995 00		65 00	
4414	Lynchburgh to Bristol, Tenn	do	205		14	49,200 00		240 00	
4415	Portsmouth to Weldon, N. C	Seaboard and Roanoke	80		6	6,000 00		75 00	Old rate of pay.
4701	Glade Spring to Saltville	Atlantic, Mississippi and Ohio	9.5		6	285 00		30 00	
				1,464.59			207,095 50		
	NORTH CAROLINA.								
5001	Raleigh to Weldon	Raleigh and Gaston	97		7	7,275 00		75 00	
5002	Weldon to Wilmington Branch, Rocky Mount to Tarborough.	Wilmington and Weldon	162.25 17		14 7	24,337 50 608 00		150 00 35.765	
5003	Wilmington to Wadesborough	Wilmington, Charlotte and Rutherford.	141		7	7,050 00		50 00	
5004	Goldsborough to Charlotte	Richmond and Danville	93 130		12 12	2',468 00		126 00 75 00	
5005	Goldsborough to Morehead City	Atlantic and North Carolina	95		7	5,225 00		55 00	
5006	Salisbury to Old Fort	Western North Carolina	114		6	5,700 00		50 00	
5007	Charlotte to Buffalo Paper Mills	Wilmington, Charlotte and Rutherford; Western Division.	52.5		6	2,625 00		50 00	
5213	Charlotte to Statesville	Atlantic, Tennessee and Ohio	48.51		6	1,936 00		40 00	
5216	Raleigh to Sanford	Raleigh and Augusta Air-Line	45.78		7	2,289 00		50 00	
5216	Sanford to Fayetteville	Western	38.15		7	1,907 50		50 00	
5216	Sanford to Egypt Depot	do	7		2	147 00		21 00	
5220	Greensborough to Salem	Northwestern North Carolina	29.31		6	1,465 50		50 00	
				1,070.5			82,033 50		
	SOUTH CAROLINA.								
5601	Charlotte, N. C., to Augusta, Ga	Charlotte, Columbia and Augusta	195		13	24,375 00		125 00	
5602	Columbia to Greenville C. H Branch, Hodges to Abbeville C. H. Branch, Belton to Anderson C. H	Greenville and Columbia	143.5 11.5 9.75		6 6 6	11,400 00		75 00 30 00 30 00	
5604	Columbia to Wilmington, N. C	Wilmington, Columbia and Augusta	82.08 109.70		14 14	24,663 00		100 00 150 00	

	Branch, Kingsville to Camden		119		7			70 00		
5605	Branch, Kingsville to Columbia	South Carolina	37.5		7	17,055 00		50 00		
	Branch, Branchville to Charleston.		27		7			70 00		
			62		7			80 00		
5606	Charleston to Savannah, Ga	Savannah and Charleston	104		7	13,000 00		125 00		
5607	Charleston to Florence	Northeastern	104		13	13,000 00		125 00		
5608	Florence to Cheraw	Cheraw and Darlington	40		7	2,000 00		50 00		
5609	Chester C. H. to Yorkville	King's Mountain	23.5		6	1,175 00		50 00		
5610	Alston to Spartanburgh C. H	Spartanburgh and Union	68.75		6	3,437 50		50 00		
5611	Newberry C. H. to Laurens C. H	Joseph Crews	31.52		3	1,200 00		38 07		
5612	Anderson C. H. to Walhalla	Greenville and Columbia	34		6	1,090 00		30 00		
5707	Port Royal to Augusta, Ga	Port Royal	112.28		7	5,614 00		50 00		
				1,315.08			117,939 50			
	GEORGIA.									
6001	August to Atlanta	Georgia	171.666		13	21,458 33		125 00		
6002	Atlanta to Chattanooga, Tenn	Western and Atlantic	138		7	17,250 00		125 00		
6003	Atlanta to West Point	Atlanta and West Point	86.25		7	10,781 25		125 00		
6004	Millen to Augusta	Central Railroad and Banking Co.	53.125		14	6,640 62		125 00		
6005	Washington to Double Wells	Georgia	18.5		7	925 00		50 00		
6006	Union Point to Athens	do	41		7	3,315 00		75 00		
6007	Kingston to Rome	Rome	20.5		7	1,025 00		50 00		
6008	Savannah to Live Oak, Fla	Atlantic and Gulf	180.75		7	23,350 00		100 00		
	Branch, Lawton to Bainbridge.		105.5		7			50 00		
6009	Savannah to Macon	Central Railroad and Banking Co.	192.125		21	21,133 75		110 00		
6010	Macon to Columbus	Southwestern	100		13	7,500 00		75 00		
6011	Macon to Atlanta	Macon and Western	103		14	10,300 00		100 00		
6012	Macon to Brunswick	Macon and Brunswick	198		7	9,900 00		50 00		
6013	Gordon to Milledgeville	Central Railroad and Banking Co.	18.25		6	912 50		50 00		
6014	Eatonton to Milledgeville	do	22.125		6	1,106 00		50 00		
	Fort Valley to Eufaula, Ala		115.666		13			70 00		
6015	Branch, Renwick to Albany	Southwestern	22.5		7	10,181 66		50 00		
	Branch, Cuthbert to Fort Gaines		24		7			40 00		
6016	Thomasville to Albany	Atlantic and Gulf	58.333		7	2,916 00		50 00		
6017	Atlanta to Charlotte, N. C	Atlanta and Richmond Air-Line	266.5		7	18,655 00		70 00		
6018	Fort Valley to Perry	Southwestern	13.32		6	666 00		50 00	Pay estimated.	
6143	Barnesville to Thomaston	Macon and Western	17.25		6	690 00		40 00		
6144	Cartersville to Rock Mart	Cherokee	22		6	660 00		30 00		
6145	Camac to Macon	Macon and Augusta	79		6	3,950 00		50 00		
6146	Griffin to Carrollton	Savannah, Griffin & North Alabama	61		6	1,830 00		30 00		
6191	Brunswick to Albany	Brunswick and Albany	171.25		6	5,137 50		30 00		
6231	Columbus to Hamilton	North and South	23.51		6	1,057 95		45 00		
				2,323.12			181,341 56			
	FLORIDA.									
6401	Fernandina to Cedar Keys	Atlantic, Gulf and West India Transit Company.	47.4		12	7,740 00		50 00		
			107.4		6			50 00	Old rate of pay.	

B.—*Railroad service as in operation on the 30th of June*, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	FLORIDA—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
6402	Jacksonville to Chattahoochee River.	Jacksonville, Pensacola and Mobile.	131.25		6	12,157 50		50 00	Old rate of pay.
	Branch, Tallahassee to Saint Mark's.		65.5		6			75 00	
			21.75		3			30 00	
6404	Pensacola to Whiting Junction, Ala.	Pensacola and Louisville	44		7	2,200 00		50 00	
6405	Tocoi to Saint Augustine	Saint John's	15.69		6	784 50		50 00	Do.
6406	Pensacola to Millview	Pensacola and Perdido	10.62		6	318 75		30 00	Do.
				443.61			23,170 75		
	ALABAMA.								
6601	Montgomery to West Point, Ga	Western Railroad Company of Alabama.	88.5		6	11,062 50		125 00	
6602	Montgomery to Selma	do	50		6	2,500 00		50 00	
6603	Montgomery to Eufaula	Montgomery and Eufaula	81.24		6	4,062 00		50 00	
6604	Montgomery to Decatur	South and North Alabama	63.6		7	16,425 25		117 50	
			119.05		7			75 00	
6605	Memphis, Tenn., to Stevenson, Ala.	Memphis and Charleston	271.5		13	40,725 00		150 00	
	Branch, Moscow, Tenn., to Somerville.		14.5		6	435 00		30 00	
	Branch, Tuscumbia, to Florence.		6.5		7	325 00		50 00	
6606	Marion Junction to Sawyerville	Selma, Marion and Memphis	45.12		6	2,256 00		50 00	
6607	Opelika to Columbus, Ga	Western Railroad Company of Alabama.	28		6	2,100 00		75 00	
6608	Columbus, Ga., to Troy, Ala	Mobile and Girard	90		6	4,500 00		50 00	
6609	Selma to York Station	Alabama Central	81.7		7	6,127 50		75 00	Do.
6610	Selma to Dalton, Ga	Selma, Rome and Dalton	217.5		6	23,750 00		100 00	
6611	Gainesville to Gainesville Junction, Miss.	Mobile and Ohio	22		6	1,100 00		50 00	Do.
6612	Mobile to Montgomery	Mobile and Montgomery	179		7	20,850 00		150 00	
6614	Mobile to New Orleans, La	New Orleans, Mobile and Texas	140		14	18,200 00		130 00	

6614	Opelika to Buffalo	East Alabama and Cincinnati	22.5		6	675 00		30 00	
6615	Chattanooga, Tenn., to Meridian, Miss.	Alabama and Chattanooga	200		7	15,370 00		53 00	Do.
6616	Opelika to Salisbury	Savannah and Memphis	41.68		6	1,675 20		40 00	
6617	Selma to Pine Apple	Selma and Gulf	43.19		6	2,159 50		50 00	
6618	Mobile to Bigbee Bridge	Mobile and Alabama Grand Trunk	59.7		6	1,791 60		30 00	Do.
6619	Chehaw to Tuskegee	Tuskegee	6		6	300 00		50 00	
6620	Atalla to Gadsden	East Alabama and Cincinnati	6		6	300 00		50 00	Do.
6621	Eufaula to Clayton	Vicksburgh and Brunswick	22.5		6	1,125 00		50 00	
				2,010.18			183,813 95		
	MISSISSIPPI.								
7001	Canton to Cairo, Ill	Southern Railroad Association	342.98		13	68,596 00		200 00	Do.
7002	Memphis, Tenn., to Grenada, Miss.	Mississippi and Tennessee	101.7		7	8,136 00		80 00	
7003	Vicksburgh to Meridian	Vicksburgh and Meridian	45.5 95.2		13 7	11,690 00		100 00 75 00	
7004	Mobile, Ala., to Columbus, Ky. Branch, Artesia to Columbus, Miss.	Mobile and Ohio	472.7 14		7 7	59,927 50		125 00 60 00	Do.
7006	Grand Gulf to Port Gibson	Grand Gulf and Port Gibson	8		6	600 00		75 00	
7007	Muldon to Aberdeen	Mobile and Ohio	9		6	450 00		50 00	Do.
7008	Middleton Station, Tenn., to Ripley, Miss.	Ripley	24.3		6	729 00		30 00	
				1,113.38			150,128 50		
	LOUISIANA.								
8001	New Orleans to Brashear	Morgan's Louisiana and Texas Railroad.	83		7	12,850 00		150 00	$400 per annum included for side supply.
8002	New Orleans to Canton, Miss	New Orleans, Jackson and Great Northern.	206		13	41,200 00		200 00	
8003	Baton Rouge to Livonia	Baton Rouge, Grosse Tête and Opelousas.	28		3	360 00		12 86	
8004	Clinton to Port Hudson	Clinton and Port Hudson	21		3	630 00		30 00	
8005	Vicksburgh, Miss., to Monroe, La	North Louisiana and Texas	75.5		7	6,163 50		75 00	$500 per annum included for ferriage and mail-messenger service.
8028	Saint Francisville to Woodville, Miss.	West Feliciana	27.57		3	964 95		35 00	
8090	New Orleans to Donaldsonville	New Orleans, Mobile and Texas	63.66		6	3,183 00		50 00	
8098	Terre Bonne to Houma	Morgan's Louisiana and Texas Railroad.	15.28		6	764 00		50 00	
				520.01			66,114 45		
	TEXAS.								
8502	Houston to Galveston	Galveston, Houston and Henderson.	50		12	8,000 00		160 00	
8503	Houston to Dennison	Houston and Texas Central	337.55		6	34,035 00		100 83	
8504	Harrisburgh to Columbus Columbus to Schulenburgh	Galveston, Harrisburgh and San Antonio.	84 24		6 6	8,400 00 1,200 00		100 00 50 00	Pay estimated.
8505	Hempstead to Austin	Houston and Texas Central	118.7		6	11,870 00		100 00	

B.—*Railroad service as in operation on the 30th of June, 1874*—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	TEXAS—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
8506	Shreveport, La., to Dallas	Texas and Pacific	189.2		6	15,136 00		80 00	
8577a	Bremond to Waco	Waco and Northwestern, (operated by Houston and Texas Central.)	44.56		6	2,896 40		65 00	
8666	Rockdale to Longview	International and Great Northern	201.52		6	10,076 00		50 00	
8683	Houston to Mineola	do	249.5		6	10,175 00		50 00	Forty-six miles covered by route 8666.
8684	Indianola to Cuero	Gulf, Western Texas and Pacific	67.2		6	3,360 00		50 00	
8749	Marshall to Texarkana, Ark	Texas and Pacific	74		6	3,700 00		50 00	Pay estimated.
				1,440.23			108,848 40		
	ARKANSAS.								
7501	Memphis, Tenn., to Argenta, Ark	Memphis and Little Rock	134		7	13,400 00		100 00	
7502a	Helena to Clarendon	Arkansas Central	48.2		6	2,169 00		45 00	
7525a	Chicot to Pine Bluff	Texas, Mississippi River and Northwestern.	72.78		3	3,275 10		45 00	
7645a	Chicot to Monticello	do	44.28		6	1,771 20		40 00	
				299.26			20,615 30		
	MISSOURI.								
10501	Saint Louis to Atchison, Kans	Pacific Railroad Company of Missouri.	285.5		12	65,807 50		215 00	
			44.25		12			100 00	
10502	Saint Louis to Columbus, Ky	Saint Louis and Iron Mountain, and Cairo and Fulton.	177		13	40,860 00		100 00	
	Branch, Mineral Point to Potosi		4		6			50 00	
	Branch, Bismarck to Argenta, Ark.		262		6			80 00	
	Branch, Argenta, Ark., to Fulton		125		6	6,250 00		50 00	Pay estimated.
	Branch, Cairo, Ill., to Poplar Bluff, Mo.		73.73		6	3,686 50		50 00	Do.
10503	Pacific to Vinita, Ind. T	South Pacific	327.25		6	32,725 00		100 00	
10504	Saint Louis to Kansas City	Saint Louis, Kansas City and Northern.	371.75		6	46,915 00		180 00	
10505	Quincy, Ill., to Saint Joseph, Mo	Hannibal and Saint Joseph	203.5		13	40,456 25		237 50	
	Branch, Palmyra to Hannibal		15		19			75 00	

10506	Kansas City to Council Bluffs, Iowa.	Kansas City, Saint Joseph and Council Bluffs.	203		12	32,719 00		143 00	
	Branch, Saint Joseph to Hopkins.		61.5		6			60 00	
10507	Moberly to Ottumwa, Iowa	Saint Louis, Kansas City and Northern.	131		12	9,825 00		75 00	
10508	Tipton to Boonville	Pacific Railroad Company of Missouri.	25		6	1,250 00		50 00	
10509	Centralia to Columbia	Saint Louis, Kansas City and Northern.	22		12	1,188 00		54 00	
10510	Kansas City to Cameron	Hannibal and Saint Joseph	54		13	13,258 00		232 00	$730 per annum included for ferriage.
10512	Sedalia to Dennison, Tex	Missouri, Kansas and Texas	447		6	106,386 00		238 00	
10513	Saint Joseph to Lexington	Saint Louis and Saint Joseph	76.75		6	3,837 50		50 00	
10514	Brunswick to Pattonsburgh	Brunswick and Chillicothe and Saint Louis, Council Bluffs and Omaha.	80.05		6	4,002 50		50 00	
10514a	Holden to Paola	Missouri, Kansas and Texas	55		6	2,750 00		50 00	
10515a	Hannibal to Sedalia	do	142.88		6	30,719 20		215 00	
10516a	Alexandria to Centreville	Missouri, Iowa and Nebraska	85.63		6	4,281 50		50 00	
10517a	Pleasant Hill to Lawrence, Kans.	Saint Louis, Lawrence and Western	62		6	3,100 00		50 00	
10518a	Sedalia to Lexington	Pacific Railroad Co. of Missouri	56.25		6	2,812 50		50 00	
10519a	Quincy, Ill., to Keokuk, Iowa	Mississippi Valley and Western	41		6	2,337 00		57 00	
10520a	Quincy, Ill., to Kirksville, Mo	Quincy, Missouri and Pacific	71.28		6	4,276 80		60 00	
10521a	Pierce City to Smithfield	Memphis, Carthage and Northwestern.	45.31		6	2,265 50		50 00	
10522a	Mexico to Cedar City	Chicago and Alton	50.62		6	2,531 00		50 00	
10523a	Roodhouse, Ill., to Mexico, Mo	do	90		6	12,600 00		140 00	
10524a	Cuba to Salem	Saint Louis, Salem and Little Rock	40.88		6	1,226 40		30 00	
				3,650 13			489,066 15		
	TENNESSEE.								
10001	Knoxville to Bristol	East Tennessee, Virginia and Georgia.	130.7		14	29,407 50		225 00	Old rate of pay.
10002	Knoxville to Chattanooga	do	112		14	28,050 00		225 00	Do.
	Branch, Cleveland to Dalton, Ga		28.5		7			100 00	
10003	Rogersville to Bull's Gap	Rogersville and Jefferson	15		6	790 00		52 66	Do.
10004	Nashville to Chattanooga	Nashville and Chattanooga	114		13	24,925 00		145 00	
	Branch, Wartrace Depot to Shelbyville.		39		80			205 00	
			8		7			50 00	
10005	Fayetteville to Decherd	Southern Railway Security Company.	40		6	1,600 00		40 00	Do.
10006	Nashville to Decatur, Ala	Nashville and Decatur	122.333		12	10,765 33		88 00	
10007	Nashville to Hickman, Ky	Nashville and Chattanooga	170.82		6	13,323 96		78 00	
10008	Nashville to Guthrie, Ky	Saint Louis and Southeastern	48		7	5,376 00		112 00	
10009	Guthrie, Ky., to Paris, Tenn	Memphis, Clarksville and Louisville.	82.5		7	8,250 00		100 00	Do.
10010	Memphis to Paris	Louisville and Nashville	132.5		12	19,212 50		145 00	
10011	Knoxville to Careyville	Knoxville and Kentucky	38.94		6	1,947 00		50 00	Pay estimated.
10012	Morristown to Riverside	Cincinnati, Cumberland Gap and Charleston.	39.8		6	1,592 00		40 00	

B.—*Railroad service as in operation on the 30th of June, 1874*—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	TENNESSEE—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
10014	Tracy City to Cowan	Tennessee Coal and Railroad Company.	23		6	690 00		30 00	Old rate of pay.
10015	Memphis to Covington	Paducah and Memphis	38.31		6	1,532 40		40 00	
10095	Jasper to Bridgeport, Ala	Nashville and Chattanooga	12		6	360 00		30 00	
10123	Nashville to Lebanon	Tennessee and Pacific	32.75		6	1,637 50		50 00	
				1,228.153			149,459 19		
	KENTUCKY.								
9605	Ashland to Coalton	Lexington and Big Sandy	11		6	325 00		29 54	Do.
9606	Covington to Nicholasville	Kentucky Central	99		12	10,550 00		100 00	
			13		6			50 00	
9607	La Grange to Lexington	Louisville, Cincinnati & Lexington	67		12	6,700 00		100 00	
9607a	Cincinnati, Ohio, to Louisville, Ky	do	111.5		12	22,300 00		200 00	
9608	Louisville to Nashville, Tenn	Louisville and Nashville	186.6		12	38,719 50		207 50	
8609	Bardstown Junction to Bardstown	do	17.3		6	692 00		40 00	
9610	Lebanon Junction to Fish Point Branch, Richmond Junction to Richmond.	do	109.9		6	7,624 60		54 00	
			33.8		6			50 00	
9611	Bowling Green to Guthrie	do	51		13	7,956 00		156 00	
9612	Paducah to Trimble, Tenn	Paducah and Gulf	76.64		6	3,832 00		50 00	Pay estimated.
9612a	Evansville, Ind., to Guthrie, Ky	Saint Louis and Southeastern	110.66		7	11,951 28		108 00	
9738	Elizabethtown to Paducah	Louisville, Paducah and Southwestern.	185		6	15,725 00		85 00	Old rate of pay.
9742	Glasgow Junction to Glasgow	Louisville and Nashville	12		6	600 00		50 00	
9796a	Anchorage to Shelbyville	Louisville, Cincinnati & Lexington	19		6	950 00		50 00	Do.
9824	Grayson to Greenup Court-House	Eastern Kentucky	23.75		6	950 00		40 00	
9842	Owensborough to Owensborough Junction.	Owensborough and Russellville	36.13		6	1,083 90		30 00	Do.
9843	Maysville to Paris	Maysville and Lexington	50		12	2,950 00		59 00	
9846a	Lexington to Mount Sterling	Louisville, Cincinnati & Lexington	33.84		6	1,692 00		50 00	
				1,247 12			134,601.28		
	OHIO.								
9001	Bellaire to Columbus	Central Ohio	137.875		12	24,128 12		175 00	
9002	Pittsburgh, Pa., to Chicago, Ill	Pittsburgh, Fort Wayne and Chicago.	409.5		12	140,850 00		300 00	
9003	Rochester, Pa., to Bellaire, Ohio	Cleveland and Pittsburgh	68.75		18	6,875 00		100 00	

9005	Hudson to Columbus	Cleveland, Mount Vernon and Delaware.	145.88		6	8,023 40		55 00	
9006	Cleveland to Sharon, Pa	Atlantic and Great Western	48.75 32.61		6 6	6,555 50		100 00 50 00	
9007	Cleveland to Wellsville	Cleveland and Pittsburgh	102.36		18	15,558 72		152 00	
9008	Elyria to Millbury	Lake Shore and Michigan Southern	74.98		6	52,860 90		705 00	
9009	Bayard to New Philadelphia	Cleveland and Pittsburgh	32.5		6	1,695 00		50 00	
9010	Oneida Mills to Carrollton	Carrollton and Oneida	12		6	500 00		41 66	
9011	Sandusky to Newark	Baltimore and Ohio, lessees	116.25		6	11,600 00		100 00	
9012	Xenia to Dayton	Pittsburgh, Cincinnati and Saint Louis.	17		12	1,598 00		94 00	
9013	Springfield to Sandusky	Cincinnati, Sandusky and Cleveland.	131.35		12	6,567 50		50 00	Do.
9015	Columbus to Delaware	Cleveland, Columbus, Cincinnati and Indianapolis.	24.75		24	2,970 00		120 00	
9016	Columbus to Xenia	Columbus and Xenia	55		6	11,550 00		210 00	
9017	Columbus to Indianapolis, Ind	Columbus, Chicago and Indiana Central.	188		12	31,208 00		166 00	
9018	Galion to Indianapolis, Ind	Cleveland, Columbus, Cincinnati and Indianapolis.	204		12	37,740 00		185 00	
9019	Blanchester to Hillsborough	Marietta and Cincinnati	21		6	1,050 00		50 00	
9020	Portsmouth to Reed's Mills	do	56		6	5,600 00		100 00	
9022	Toledo to Keokuk, Iowa	Toledo, Wabash and Western	198 256 4 44		12 12 12 12	123,466 00		255 00 273 00 90 00 62 00	22 miles covered by other service.
9024	Fremont to Saint Mary's	Lake Erie and Louisville	89.35		6	4,467 50		50 00	
9025	Carey to Findlay	Cincinnati, Sandusky and Cleveland.	16		12	800 00		50 00	Old rate of pay.
9026	Dayton to Union City, Ind	Dayton and Union	48.17		6	2,890 20		60 00	
9027	Dayton to Toledo	Dayton and Michigan	142.96		18	21,444 00		150 00	
9028	Hamilton to Indianapolis, Ind	Cincinnati, Hamilton and Dayton	90.49		6	4,974 50		50 00	
9029	Hamilton to Richmond, Ind	Cincinnati, Richmond and Chicago	45.1		6	5,321 80		118 00	
9030	Cincinnati to Dayton	Cincinnati, Hamilton and Dayton	26.53 33.92		43 28	10,062 37		187 50 150 00	
9031	Cincinnati to Springfield	Pittsburgh, Cincinnati and Saint Louis.	65.96 19		13 6	14,801 60		210 00 50 00	
9032	Cincinnati to Parkersburgh, W. Va.	Marietta and Cincinnati	206		6	36,050 00		175 00	
9033	Morrow to Dresden	Pittsburgh, Cincinnati and Saint Louis, lessees.	149.4		6	11,205 00		75 00	
9034	Dayton to Richmond, Ind	do	42		6	2,730 00		65 00	
9035	Valley Junction to Hagerstown	White Water Valley	70.45		6	4,403 12		62 50	
9036	Columbus to Pittsburgh, Pa Branch, Means to Cadiz	Pittsburgh, Cincinnati and Saint Louis.	160 8		12 12	37,200 00		230 00 50 00	
9037	Springfield to Columbus	Cincinnati, Sandusky and Cleveland.	45 86		6	2,293 00		50 00	Do.
9038	Salamanca, N.Y., to Dayton, Ohio	Atlantic and Great Western	389.55		12	35,059 50		90 00	
9039	Youngstown to Cross Cut	Pittsburgh, Fort Wayne and Chicago.	22.8		6	1,140 00		50 00	

B.—*Railroad service as in operation on the 30th of June, 1874*—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	OHIO—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
9040	Columbus to Athens. Branch, Logan to New Straitsville.	Columbus and Hocking Valley	77.4 13.02		12 12	7,293 30		87 50 40 00	
9041	Niles to New Lisbon	Atlantic and Great Western, lessees.	33.94		6	1,697 00		50 00	
9042	Newark to Shawnee	Newark, Somerset and Straitsville	44.45		12	1,761 80		40 00	
9043	Clinton to Massillon	Cleveland, Mount Vernon and Delaware.	13.7		6	542 00		40 00	
9044	Marietta to Canal Dover	Marietta and Pittsburgh	99.47		6	3,978 80		40 00	
9045	Black River to Ulrichsville	Lake Shore and Tuscarawas Valley	102.45		6	5,122 50		50 00	
9046	Cleveland to Cincinnati	Cleveland, Columbus, Cincinnati and Indianapolis.	245.25		12	55,181 25		225 00	
9047	Mansfield to Toledo	Pennsylvania, lessees	88.1		6	5,286 00		60 00	
9048	Harbor to Youngstown	do	62.1		6	3,105 00		50 00	
9049	Toledo to Elkhart, Ind	Lake Shore and Michigan Southern	133.6		6	76,820 00		575 00	
				5,056,575			845,962 38		
	INDIANA.								
12001	Indianapolis to Vincennes	Indianapolis and Vincennes	116.32		6	5,816 00		50 00	
12002	Indianapolis to Terre Haute	Terre Haute and Indianapolis	73		21	14,600 00		200 00	
12003	Indianapolis to Cincinnati, Ohio	Indianapolis, Cincinnati and Lafayette.	113.5		18	30,418 00		268 00	
12004	Indianapolis to Peru	Indianapolis, Peru and Chicago	54 24		18 6	10,500 00		150 00 75 00	$600 per annum included for side service.
12005	Indianapolis to La Fayette	Indianapolis, Cincinnati and La Fayette.	65.625		18	17,193 75		262 00	
12006	Columbus to Madison	Jeffersonville, Madison and Indianapolis.	46		6	2,300 00		50 00	
12007	New Albany to Indianapolis	do	114		18	15,276 00		134 00	
12008	New Albany to Michigan City	Louisville, New Albany and Chicago.	61 227		12 6	14,400 00		50 00	Old rate of pay.
12009	Richmond to Chicago, Ill	Pittsburgh, Cincinnati and Saint Louis.	293.5		12	16,912 50		75 00	
12010	Cincinnati, Ohio, to East Saint Louis, Ill	Ohio and Mississippi	341		12	68,200 00		200 00	

12012	Evansville to Terre Haute	Evansville, Madison and Indianapolis.	68		6	2,720 00	40 00	
12012a	Terre Haute to Rockville	Evansville and Crawfordsville	110		12	11,000 00	100 00	
		Logansport, Crawfordsville and Southwestern.	23		6	1,150 00	50 00	
12013	State Line to Logansport	Pittsburgh, Cincinnati and Saint Louis.	61		6	4,575 00	75 00	
12014	Peru to La Porte	Chicago, Cincinnati and Louisville	73		6	4,015 00	55 00	
12015	Fairland to Martinsville	Cincinnati and Martinsville	38.5		6	1,925 00	50 00	
12016	Bradford, Ohio, to Logansport, Ind	Pittsburgh, Cincinnati and Saint Louis.	114.6		6	5,730 00	50 00	
12017	Indianapolis to Peoria, Ill	Indianapolis, Bloomington and Western.	212.2		6	37,135 00	175 00	
12018	Jeffersonville to North Vernon	Ohio and Mississippi	53.5		6	5,350 00	100 00	
12019	Fort Wayne to Connersville	Fort Wayne, Muncie and Cincinnati.	109		6	6,322 00	58 00	
12020	Richmond to Fort Wayne	Cincinnati, Richmond and Fort Wayne.	91.5		6	4,575 00	50 00	
12021	Marion to Goshen	Cincinnati, Wabash and Michigan	82		6	4,100 00	50 00	
12022	Princeton to Albion, Ill	Louisville, New Albany and Saint Louis Air-Line.	10.85 20.18		6 6	1,334 50	30 00 50 00	Pay estimated.
12023	Terre Haute to Danville, Ill	Evansville, Terre Haute and Chicago.	56.6		6	2,830 00	50 00	
12024	Indianapolis to Terre Haute	Indianapolis and Saint Louis	72		18	8,280 00	115 00	
12025	La Porte to Michigan City	Indianapolis, Peru and Chicago	12.36		6	618 00	50 00	
12026	Auburn to Logansport	Detroit, Eel River and Illinois	82.8		6	4,305 60	52 00	
12027	Rockville to Logansport	Logansport, Crawfordsville and Southwestern.	92.1		6	4,605 00	50 00	
12028	La Fayette to Kankakee, Ill	Cincinnati, La Fayette and Chicago	57.35		6	15,025 70	262 00	
12029	Terre Haute to Marts	Cincinnati and Terre Haute	26.15		6	915 25	35 00	
12030	Attica to Veedersburgh	Indiana, North and South	14		6	560 00	40 00	
12030a	Evansville to Boonsville	Lake Erie, Evansville, and Southwestern.	18		6	900 00	50 00	
				2,959.635			323,587 30	
	ILLINOIS.							
11401	Chicago to Milwaukee, Wis	Chicago and Northwestern	87		18	19,140 00	220 00	
11402	Chicago to Freeport	do	92.5 28.5		18 12	25,410 00	210 00	
11403	Chicago to Council Bluffs, Iowa	do	98 392		24 18	127,730 00	255 00 275 00	On 351 miles. On 139 miles.
11404	Chicago to Davenport, Iowa	Chicago, Rock Island and Pacific	159 24		12 12	52,440 00	280 00 305 00	$600 per annum included for railway post-office cars.
11405	Chicago to Burlington, Iowa Branch to Galena Junction Branch to Keithsburgh	Chicago, Burlington and Quincy	207.7 13 59.3		18 6 6	85,317 10	273 00 50 00 50 00	$25,000 per annum included for Sunday service.
11406	Chicago to East Saint Louis	Chicago and Alton	283		12	56,600 00	200 00	
11407	Chicago to Cairo	Illinois Central	55 310		12 12	67,900 00	220 00 180 00	
11408	Elgin to Geneva	Chicago and Northwestern	44		6	1,760 00	40 00	

B.—*Railroad service as in operation on the 30th of June, 1874*—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	ILLINOIS—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
11409	Rushville to Yates City Branch, Elmwood to Buda	Chicago, Burlington and Quincy	63.75 45		6 6	6,525 00		60 00	
11410	Courtland Station to Sycamore	Sycamore and Courtland	5		12	400 00		80 00	$150 per per annum included for mail-messenger service.
11411	State Line, Ind., to Warsaw, Ill. Branch, La Harpe to Burlington, Iowa.	Toledo, Peoria and Warsaw	228.75 19.25		6 6	15,240 00 962 50		64 00 50 00	$600 per annum included for ferriage. Pay estimated.
11412	Bureau Junction to Peoria	Chicago, Rock Island and Pacific	47		6	4,230 00		90 00	
11413	Joliet to Lake Station, Ind.	Michigan Central	45		6	1,800 00		40 00	
11414	Peoria to Jacksonville	Peoria, Pekin and Jacksonville	87.4		6½	6,555 00		75 00	
11415	Peoria to Galesburgh	Chicago, Burlington and Quincy	54		6	8,370 00		155 00	
11416	Bloomington to Godfrey	Chicago and Alton	111.4 40.6		12 12	18,948 00		130 00 110 00	
11417	Galesburgh to Quincy	Chicago, Burlington and Quincy	100		18	19,000 00		190 00	
11418	Dubuque, Iowa, to Centralia, Ill	Illinois Central	344		12	48,160 00		140 00	
11419	Terre Haute, Ind., to East Saint Louis, Ill.	Indianapolis and Saint Louis	189		12	40,635 00		215 00	
11421	Carbondale to Grand Tower	Grand Tower Mining, Manufacturing, and Transportation Company.	25		9	1,000 00		40 00	
11422	East Saint Louis to Du Quoin	Saint Louis, Alton and Terre Haute	71.8		12	7,180 00		100 00	
11424	Washington to Dwight Branch, Varna to Lacon	Chicago and Alton	60.21 10.6		12 12	3,540 50		50 00	
11425	East Saint Louis to Terre Haute, Ind.	Terre Haute and Indianapolis, lessees.	165.4		12	28,945 00		175 00	
11426	Decatur to East Saint Louis	Toledo, Wabash and Western	112		12	17,696 00		158 00	
11427	Pekin to Decatur	do	68.46		6	3,423 00		50 00	
11428	Peoria to Rock Island	Peoria and Rock Island	92		12	5,520 00		60 00	
11429	Sterling to Alton Junction	Rockford, Rock Island and Saint Louis.	170 100.8		12 18	24,372 00		90 00	
11430	Sagetown to Kelthsburgh	do	18		6	540 00		30 00	
11431	Quincy to Louisiana	Quincy, Alton and Saint Louis	43		6	3,440 00		80 00	
11432	Burlington, Iowa, to Quincy, Ill.	Chicago, Burlington and Quincy	71.85		6	5,388 75		75 00	
11433	Beardstown to Shawneetown	Springfield and Illinois Southeastern.	230.7		6	17,827 50		75 00	
11434	Chicago to Danville	Chicago, Danville and Vincennes	127		6	5,832 00		54 00	Pay for 108 miles; 19 miles covered by other service.

[illegible]	Branch, McLeansborough to Shawneetown.	Saint Louis and Southeastern	104.75		6			110 00	
			41.25		6	20,185 00		50 00	
11901	Streator to Aurora	Chicago, Burlington and Quincy	60.79		6				
	Branch, Aurora to Batavia		9		6	4,187 40		60 00	
11902	Mendota to Clinton	do	64.19		6	3,209 50		50 00	
11903	Hannibal, Mo., to Naples, Ill	Toledo, Wabash and Western	45.5		6			87 50	
	Branch, Maysville to Pittsfield		6		6	4,291 25		50 00	
11906	Mattoon to Hervey City	Chicago and Illinois Southern	31.66		6	1,266 40		40 00	
11907	Springfield to Gilman	Gilman, Clinton and Springfield	111.6		6	5,580 00		50 00	
11908	Carbondale to Marion	Carbondale and Shawneetown	18		6	720 00		40 00	
11909	Jacksonville to Virden	Jacksonville, Northwestern and Southeastern.	31.39		6	1,255 60		40 00	
11910	Urbana to Havana	Indianapolis, Bloomington and Western.	102.7		6				
	Branch, White Heath to Decatur		32.35		6	5,402 00		40 00	
11911	Chester to Tamaroa	Chester and Tamaroa Coal and Railroad Company.	42		6	2,100 00		50 00	
11913	Aurora to Foreston	Chicago and Iowa	81.64		6	3,265 60		40 00	
11914	Terre Haute, Ind., to Decatur, Ill	Paris and Decatur	98.53		6	3,941 20		40 00	
11915	Springfield to Havana	Springfield and Northwestern	48.2		6	1,928 00		40 00	
11916	La Fayette, Ind., to Bloomington, Ill.	Toledo, Wabash and Western	116.43		6	5,821 50		50 00	
11917	Vincennes, Ind., to Cairo, Ill	Cairo and Vincennes	156.625		6	10,963 75		70 00	
11918	Paris to Danville	Paris and Danville	36		6	1,800 00		50 00	
11919	Rock Falls to Shabbona	Chicago, Burlington and Quincy	47.23		6	1,889 20		40 00	
11920	Streator to Pekin	Chicago, Pekin and Southwestern	65.28		6	3,591 40		55 00	
11921	Chicago to Milwaukee, Wis	Milwaukee and Saint Paul	88.25		12	15,548 75		175 00	
11922	Streator to Windsor	Chicago and Paducah	128.62		6	6,431 00		50 00	Pay estimated.
11923	East Saint Louis to Murphysborough.	Cairo and Saint Louis	91		6	4,550 00		50 00	Do.
11924	Chicago to Elgin	Chicago and Pacific	36		6	1,800 00		50 00	Do.
11925	Decatur to Montezuma	Indiana and Illinois Central	87		6	3,480 00		40 00	
				6,440.955			843,834 90		
	MICHIGAN.								
12502	Toledo, Ohio, to Detroit, Mich	Lake Shore and Michigan Southern	64.75		6	8,093 75		125 00	
12503	Monroe to Adrian	do	35		6	2,625 00		75 00	
12504	Adrian to Jackson	do	47.2		6	2,360 00		50 00	
12505	White Pigeon to Kalamazoo	do	38.33		6	2,874 75		75 00	
12506	Detroit to Chicago, Ill	Michigan Central	76		30				
			209.25		24	60,615 62		212 50	
12507	Detroit to Grand Haven	Detroit and Milwaukee	190		12	19,950 00		105 00	
12508	Detroit to Port Huron	Grand Trunk	64.5		6	5,353 50		83 00	
12509	Jackson to Fort Wayne, Ind	Fort Wayne, Jackson and Saginaw	96.3		6	5,489 10		57 00	
12510	Jackson to Otsego Lake	Michigan Central	225.8		6	11,290 00		50 00	
12511	Jackson to Grand Rapids	do	94.5		6	7,087 50		75 00	
12512	Kalamazoo to Grand Rapids	Lake Shore and Michigan Southern	58.875		6	4,121 25		70 00	
12513	Ridgeway to Romeo	Saint Clair and Chicago Air-Line	14.6		6	730 00		50 00	
12515	Bay City to Monroe	Flint and Père Marquette	132		12	15,840 00		120 00	
12516	East Saginaw to Reed City	do	90.47		6	5,156 79		57 00	

B.—*Railroad service as in operation on the 30th of June*, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	MICHIGAN—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
12517	Detroit to Howard City	Detroit, Lansing and Lake Michigan.	164. 67		6	10, 703 55		65 00	
12518	Fort Wayne, Ind., to Walton, Mich.	Grand Rapids and Indiana	260. 1		6	13, 005 00		50 00	
12519	Kalamazoo to South Haven	Michigan Central	39. 81		6	1, 990 50		50 00	
12520	Lansing to Fort Wayne Junction, Ind.	Chicago and Lake Huron	168. 92		6	8, 446 00		50 00	
12521	New Buffalo to Pent Water Branch, Holland to Grand Rapids	Chicago and Michigan Lake Shore	165. 5 25. 4		12 12	15, 503 00		86 00 50 00	
12522	Port Huron to Flint	Chicago and Lake Huron	68		6	3, 400 00		50 00	
12523	Monteith to Muskegon	Michigan Lake Shore	68. 75		6	3, 437 50		50 00	
12525	Ypsilanti to Banker's	Detroit, Hillsdale and Indiana	65. 4		6	2, 943 00		45 00	
12526	Jackson to Niles	Michigan Central	103		6	5, 150 00		50 00	
12527	Grand Rapids to Newaygo	Grand Rapids, Newaygo and Lake Shore.	36. 4		6	1, 820 00		50 00	
12528	Niles to South Bend	Michigan Central	12. 2		6	610 00		50 00	
12529	Jonesville to Lansing	Lake Shore and Michigan Southern	60. 87		6	3, 043 50		50 00	
12529a	Detroit to Bay City	Detroit and Bay City	111. 13		6	7, 556 84		68 00	
12846	Esconawba to Negaunee	Chicago and Northwestern	62. 22		6	5, 288 70		85 00	
12847	Negaunee to Marquette	Marquette and Ontonagon	14		6	1, 050 00		75 00	
12849	Negaunee to Champion	do	18		6	900 00		50 00	
12948	Flint to Otter Lake	do	19. 125		6	573 75		30 00	
12949	Saginaw to Saint Louis	Saginaw Valley and Saint Louis	33. 47		6	1, 338 80		40 00	
12950	Fort Howard, Wis., to Esconawba,	Chicago and Northwestern	114. 6		6	9, 741 00		85 00	
12953	Muskegon to Big Rapids	Chicago and Michigan Lake Shore	56. 64		6	1, 699 20		30 00	
12954	Ionia to Stanton	Detroit, Lansing and Lake Michigan.	25. 3		6	1, 012 00		40 00	
12955	Walton to Traverse City	Continental Improvement Company.	26. 26		6	1, 444 30		55 00	
12956	Toledo, Ohio, to Detroit, Mich	Toledo, Canada Southern and Detroit.	56. 37		6	2, 818 50		50 00	Pay estimated.
12957	Grosse Isle to Fayette	do	69. 95		6	3, 497 50		50 00	Do.
12958	Saint Clair to Richmond	Michigan Midland and Canada	16. 74		6	837 00		50 00	Do.
12959	Walton to Petoskey	Grand Rapids and Indiana	70. 80		3	3, 540 00		50 00	Do.
				3, 371. 2			202, 936 90		

13001	Chicago, Ill., to Green Bay, Wis.	Chicago and Northwestern	189		14½	51,450 00		210 00	
13002	Kenosha to Rockford, Ill	do	63		14½				
13003	Racine to Rock Island Junction, Ill.	Western Union	73.6		6	4,416 00		60 00	
13004	Milwaukee to North McGregor, Iowa.	Chicago, Milwaukee and Saint Paul.	189.4		12	13,258 00		70 00	
13005	Milwaukee to La Crosse	do	197.2		12	24,650 00		125 00	
13006	Milwaukee to Berlin	do	198		12	45,540 00		230 00	
13007	Milton Junction to Monroe	do	94.8		12	8,532 00		90 00	
13008	Watertown to Madison	do	42.8		6	2,140 00		50 00	
13009	Horicon to Portage City	do	38.45		12	3,845 00		100 00	
13010	Nepeuskun to Winneconne	do	45.25		6	2,262 50		50 00	
13011	Warren to Mineral Point	Mineral Point	16.25		6	650 00		40 00	
13012	Sheboygan to Princeton	Sheboygan and Fond du Lac	33		6	1,650 00		50 00	
13013	Caledonia Station, Ill., to Winona Junction, Wis.	Chicago and Northwestern	79.05		6½	4,803 00		60 00	$60 per annum included for mail-messenger service.
13014	Elroy to Saint Paul, Minn. Branch, Stillwater Junction, Minn., to Stillwater.	West Wisconsin	190.35		6	14,276 25		75 00	
			198.40		12	19,840 00		100 00	
			3.25		6	97 50		30 00	
13015	Calamine to Platteville	Mineral Point	18.7		6	935 00		50 00	
13016	Madison to Portage City	Chicago and Superior	39.5		6	1,975 00		50 00	
13017	Winona, Minn., to Winona Junction, Wis.	Chicago and Northwestern	28		12	6,020 00		215 00	
13018	Menasha to Colby	Phillips and Colby, operating Wisconsin Central.	114.20		6	6,852 00		60 00	
13019	Tomah to Grand Rapids	Wisconsin Valley	48		6	2,400 00		50 00	Pay estimated.
13020	Milwaukee to Two Rivers. Branch, Manitowoc to Appleton	Wisconsin, Lake Shore and Western.	85		6	7,475 00		67 00	
			44.5		6				
13394	Oshkosh to Ripon	Chicago, Milwaukee and Saint Paul	21		6	1,050 00		50 00	
13395	Green Bay to Winona, Minn.	Green Bay and Lake Pepin	216.41		6	10,820 50		50 00	
13396	Milwaukee to Green Bay. Branch, Hilbert to Menasha.	Phillips and Colby, operating Wisconsin Central.	111.54		12	6,377 00		50 00	
			16		12				
				2,388.1			241,314 50		
	IOWA.								
11001	Keokuk to Fort Dodge	Des Moines Valley	249.7		12	18,727 50		75 00	
11002	Keokuk to Burlington	Chicago, Burlington and Quincy	42.75		6	3,420 00		80 00	
11003	Burlington to East Plattsmouth. Branch, Red Oak to Eastport.	Burlington and Missouri River	279.14		12	58,828 00		200 00	
			50		12			60 00	
11004	Wilton Junction to Leavenworth, Kans.	Chicago, Rock Island and Pacific	322.77		6	19,366 20		60 00	
11005	Davenport to Missouri River	do	54		6	80,850 00		275 00	
			264		6			250 00	
11006	Farley to Cedar Rapids	Dubuque and Southwestern	55.37		6	3,322 20		60 00	
11007	Dubuque to Sioux City	Illinois Central	327.12		12	35,001 84		107 00	
11008	Albia to Northwood	Central Railroad Company of Iowa	189.2		6	9,460 00		50 00	
11009	Calmar to Algona	Milwaukee and Saint Paul	127.8		6	6,390 00		50 00	
11010	Waterloo to Mona	Illinois Central	80		6	5,040 00		63 00	

B.—*Railroad service as in operation on the 30th of June, 1874*—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	IOWA—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
11011	Missouri Valley to Sioux City Branch, California Junction to Wisner, Nebr.	Sioux City and Pacific	76 83.4		6 6	10,630 00		85 00 50 00	
11012	Burlington to Plymouth	Burlington, Cedar Rapids and Minnesota.	228		6	17,100 00		75 00	
11013	Davenport to Fayette	Davenport and Saint Paul	90 39.33		6 6	6,466 50		50 00 50 00	Pay estimated.
11014	Davenport to Maquoketa	do	42.76		6	1,454 00		34 00	
11015	Clinton to Anamosa	Iowa Midland	74.1		6	2,964 00		40 00	
11016	Clinton to La Crescent Junction, Minn.	Chicago, Dubuque and Minnesota.	179.77		6	10,786 20		60 00	
11017	Sabula to Marion	Milwaukee and Saint Paul	87.75		6	3,510 00		40 00	
11018	Creston to Hopkins, Mo	Burlington and Missouri River	44.4		6	2,664 00		60 00	
11019	Vicle Junction to Unionville, Mo.	Burlington and Southwestern	104.75		6	5,447 00		52 00	
11003, 3d p't	Chariton to Leon	Burlington and Missouri River	37.44		6	1,872 00		50 00	
11003 4th p't	Villisca to Clarinda	do	16		6	800 00		50 00	
11005*a*	Des Moines to Indianola Branch, Summerset Junction to Winterset.	Chicago, Rock Island and Pacific	21.4 27.1		6 6	2,425 00		50 00	
11005*b*	Washington to Sigourney	do	29		6	1,160 00		40 00	
11012*a*	Muscatine to Riverside	Burlington, Cedar Rapids and Minnesota.	32.23		6	1,289 20		40 00	
11012*b*	Cedar Rapids to Postville	do	99.8		6	4,990 00		50 00	
11016*a*	Conover to Decorah	Milwaukee and Saint Paul	9.5		6	522 50		55 00	
11017*b*	Stanwood to Tipton	Chicago and Nortwestern	8.81		6	440 50		50 00	
11020*a*	Beulah to Elkader	Iowa Eastern	17.75		6	887 50		50 00	
11012*c*	Vinton to Traer	Burlington, Cedar Rapids and Minnesota.	24.77		6	990 80		40 00	
				3,415.91			316,804 94		
	MINNESOTA.								
13301	La Crosse, Wis., to Winnebago City, Minn.	Southern Minnesota	170.5		6	10,230 00		60 00	
17701	Winona to Saint Peter Branch, Mankato Junction to Mankato	Winona and Saint Peter	141.05 6.95		6 6	12,370 00		85 00	

	IOWA.								
13505	Saint Paul to Sioux City, Iowa	Chicago, Milwaukee and Saint Paul	215. 7		6½	10, 413 00		90 00	
		Saint Paul and Sioux City	271		8½	18, 926 25		77 25	26 miles covered by another route.
13506	Saint Paul to Breckenridge	Saint Paul and Pacific	219. 25		7	10, 962 50		50 00	
13507	Saint Paul to Sauk Rapids	do	78		11¾	5, 850 00		75 00	
13508	Saint Paul to Du Luth	Lake Superior and Mississippi	156		7¾	11, 700 00		75 00	
13511	Austin to Mason City, Iowa	Chicago, Milwaukee and Saint Paul	41. 38		6	1, 655 20		40 00	
13512	Saint Paul to Stillwater	Lake Superior and Mississippi	24. 95		18	660 00		50 00	Pay for 13.2 miles; 11.75 miles covered by another route.
13513	Saint Paul to Winona	Chicago, Milwaukee and Saint Paul	103. 84		12	20, 768 00		200 00	
13514	Hastings to Glencoe	do	74. 59		6	3, 729 50		50 00	
13837	White Bear Lake to Sioux City Junction.	Minneapolis and Saint Louis	41		6	2, 054 00		50 00	
13838	Du Luth to Bismarck, Dak	Northern Pacific	229 195. 12 23		6 6 6	24, 183 00		63 00 50 00	23 miles covered by Route 13508.
13839	Saint Peter to Marshall	Chicago and Northwestern	109. 66		6	5, 483 00		50 00	Pay estimated.
13840	East Saint Cloud Station to Melrose.	Saint Paul and Pacific	35		6	1, 750 00		50 00	
13841	Winona to La Crescent	Chicago, Milwaukee and Saint Paul	25		6	1, 250 00		50 00	
				2, 158. 59			150, 986 45		
	NEBRASKA.								
14401	Omaha to Ogden City, Utah	Union Pacific	1, 032. 2		14	325, 143 00		315 00	
14451	Plattsmouth to Kearney Junction.	Burlington and Missouri River Railroad in Nebraska.	191		6	13, 370 00		70 00	
14478	Omaha to Herman	Omaha and Northwestern	40. 2		6	2, 010 00		50 00	
14479	Omaha to Concord	Burlington and Missouri River Railroad in Nebraska.	21. 5		6	1, 925 50		75 00	$313 per annum included for ferriage.
14483	Nebraska City to Seward	Midland Pacific	84. 1		6	7, 148 50		85 00	
14497	Crete to Beatrice	Burlington and Missouri River Railroad in Nebraska.	31. 76		6	1, 588 00		50 00	
				1, 400. 76			351, 185 00		
	KANSAS.								
14001	Kansas City, Mo., to Cheyenne, Wyo. Branch, Lawrence to Leavenworth.	Kansas Pacific	745 33		7 7	144, 520 00		190 00 90 00	
14002	Atchison to Waterville	Central Branch Union Pacific	100		7	7, 500 00		75 00	
14003	Lawrence to Coffeyville Branch, Cherry Vale to Independence.	Leavenworth, Lawrence and Galveston.	140. 3 10		12 12	14, 530 00		100 00 50 00	
14004	Elwood to Hastings, Nebr	Saint Joseph and Denver City	227. 2		6	12, 496 00		55 00	
14005	Kansas City, Mo., to Baxter Springs, Kans.	Missouri River, Fort Scott and Gulf	164. 6		6	16, 400 00		100 00	
14006	Junction City to Parsons	Missouri, Kansas and Texas	156. 5		6	9, 390 00		60 00	
14143	Atchison to Sargent Branch, Newton to Wichita	Atchison, Topeka and Santa Fé	470. 25 26		6 6	37, 088 75		75 00 70 00	

B.—*Railroad service as in operation on the 30th of June*, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	KANSAS—Continued.		*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	*Dollars.*	
14211	Olathe to Ottawa	Leavenworth, Lawrence and Galveston.	32		6	3,200 00		100 00	
14212	Atchison to Lincoln, Nebr	Atchison and Nebraska	152.28		6	9,136 80		60 00	
14235	Leavenworth to Holton	Kansas Central	56		6	2,800 00		50 00	
14311	Lawrence to Carbondale	Saint Louis, Lawrence and Western.	32.9		6	1,974 00		60 00	
14314	Junction City to Clay Centre	Junction City and Fort Kearney	33.85		6	2,031 00		60 00	
				2,379.28			261,066 55		
	NEVADA.								
16419	Virginia City to Reno	Virginia and Truckee	51.75		6	3,741 00		72 29	Old rate of pay.
				51.75			3,741 00		
	CALIFORNIA.								
14701	San Francisco to Ogden City, Utah	Central Pacific	877.5		7	204,457 50		233 00	
14702	San Francisco to Soledad	Southern Pacific	143.3		14	11,464 00		80 00	
	Branch, Gilroy to Hollister		14		7	700 00		50 00	
14703	Roseville to Tehama	Central Pacific, (Oregon division)	105		7	13,125 00		125 00	
14704	Folsom City to Shingle Springs	Placerville and Sacramento Valley	26		6	1,300 00		50 00	
14705	Sacramento City to Folsom City	Sacramento Valley	23.2		12	1,450 00		62 50	
14707	Sacramento City to San Francisco	California Pacific	83		14	12,450 00		150 00	Do.
	Branch, Davisville to Marysville		42		6	3,150 00		75 00	
14708	Napa Junction to Calistoga	do	36		6	1,800 00		50 00	
14709	Marysville to Oroville	California Northern	30		6	1,500 00		50 00	
14728	Wilmington to Los Angeles	Los Angeles and San Pedro	22		6	1,650 00		75 00	
14876	Lathrop to Goshen	Central Pacific	144.91		6	11,592 80		80 00	
14877	Elmira to Vacaville	Vaca Valley	4		7	200 00		50 00	
14880	San Francisco to Cloverdale	San Francisco and North Pacific	56		6	2,800 00		50 00	Do.
14881	Stockton to Milton	Stockton and Copperopolis	30		6	1,500 00		50 00	
	Branch, Peters to Oakdale		19		6	950 00		50 00	
14945	Goshen to Tipton	Southern Pacific, (Tulare division)	21		7	1,575 00		75 00	
				1,676.91			271,664 30		

13001	Kalama to Tacoma	North Pacific, (Pacific division)	106.6	106.00	6	5,330 00	5,330 00	50 00	Pay estimated.
	DAKOTA TERRITORY.								
13929	Sioux City, Iowa, to Yankton, Dak.	Dakota Southern	61.48	61.48	6	4,611 00	4,611 00	75 00	
	UTAH TERRITORY.								
16633	Salt Lake City to Ogden City	Utah Central	36.5		6	2,920 00		80 00	
16651	Ogden City to Franklin	Utah Northern	80.5		7	4,025 00		50 00	Do.
				117			6,945 00		
	COLORADO TERRITORY.								
17038	Denver to Black Hawk	Colorado Central	32.5		7	2,310 00		60 00	
	Branch, Golden Junction to Longmont.		39		7	1,950 00		50 00	
17051	Hughes Station to Erie	Denver and Boulder Valley	15		6	1,125 00		75 00	
	Denver to Pueblo	Denver and Rio Grande	119		7	8,330 00		70 00	
17064	Branch, Pueblo to Coal Creek	Denver and Arkansas Valley	35		6	1,750 00		50 00	Old rate of pay.
				246.5			15,465 00		

JOHN L. ROUTT,
Second Assistant Postmaster-General.

C.—*Steamboat service as in operation on the 30th of June, 1874.*

Number of route.	State and termini.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Remarks.
	NEW HAMPSHIRE.	*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	
316	Alton Bay to Wolfborough	10		6	1,200 00		During navigation, say 7 months.
	Centre Harbor to Meredith Village	20		3			
320	Centre Harbor to West Ossipee	29		6	828 57		Do.
321	Weir's Bridge to Wolfborough	30		6	650 00		Do.
			89			2,678 57	
	MASSACHUSETTS.						
688	Wood's Hole to Nantucket	30		6	2,500 00		
			30			2,500 00	
	NEW YORK.						
1389	Whitehall to Rouse's Point	130		11	6,000 00		During navigation, say 8 months.
1694	Geneva to Watkins	65		6	3,200 00		
			195			9,200 00	
	NEW JERSEY.						
2105	New York to South Amboy	27		12	1,620 00		
2126	New York to Sandy Hook	19½		12	1,462 50		
2141	New York to Keyport	25			654 00		Six times a week 8 months; three times a week 4 months.
			71½			3,736 50	
	PENNSYLVANIA.						
2501	Pittsburgh to Greensborough	88½			6,011 25		Six times a week during navigation; three times a week residue of year.
			88½			6,011 00	
	MARYLAND.						
3521	Baltimore to Queenstown	40		6	750 00		
3696	Baltimore to Pitt's Wharf	150			5,400 00		Four times a week 8 months, to Crisfield, 108 miles; twice a week 4 months; twice a week 8 months; residue, 42 miles, once a week 4 months.
			190			6,150 00	
	WEST VIRGINIA.						
4104	Wheeling to Parkersburgh	99		6	7,200 00		
4122	Parkersburgh to Gallipolis, Ohio	86		3	4,395 00		
4136	Kanawha Court-House to Gallipolis, Ohio	65		3	1,724 50		
			250			13,319 50	

	VIRGINIA.					
4401	Washington, D. C., to Game Point, Va	55½		13	14,707 50	
4417	Norfolk to Baltimore, Md	200		6	18,000 00	
4418	Norfolk to Eastville	57		3	3,500 00	
4419	Norfolk to Matthew's Court-House	60		2	2,000 00	
4420	Norfolk to Richmond	151		3	4,500 00	
4702	Washington, D. C., to Norfolk, Va	218		2	6,000 00	
4755	Fredericksburgh to Baltimore, Md	250		2	2,600 00	Ten months in the year.
			991½		51,307 50	
	NORTH CAROLINA.					
5025	Wilmington to Fayetteville	120		2	1,745 00	
5037	Plymouth to Franklin Depot	106		3	4,500 00	
5237	Ocracoke to Hatteras	20		1	290 00	
5276	Wilmington to Smithville	30		2	600 00	
5279	Manteo to Hatteras	55		1	600 00	
5284	Norfolk, Va., to Poplar Branch, N. C	75		2	1,450 00	
			406		9,185 00	
	SOUTH CAROLINA.					
5699	Beaufort to Hilton Head	16		1	260 00	
5714	Charleston to Edisto Island	35		2	1,200 00	
			51		1,460 00	
	GEORGIA.					
6119	Trader's Hill to Fernandina, Fla	69		1	1,294 00	
6189	Rome to Gadsden, Ala	155		2	3,600 00	
			224		4,894 00	
	FLORIDA.					
6410	New York to Key West	1589		1	31,200 00	
6411	Baltimore, Md., to New Orleans, La	1700			31,200 00	Twice a month.
6412	New Troy to Cedar Keys	165		1	2,500 00	
6413	New Orleans, La., to Key West, Fla	888		1	76,000 00	
6414	Eufaula, Ala., to Apalachicola, Fla	291			11,500 00	Twice a week to Chattahoochee, 140 miles; once a week residue.
6419	Cedar Keys to Tampa	225		1	7,448 00	
6420	Pilatka to Jacksonville	83		6	5,700 00	
6421	Pilatka to Mellonville	141		2	3,500 00	
6514	Key West to Tampa	296			7,475 00	Twice a month.
			5,378		176,523 00	
	ALABAMA.					
6630	Mobile to Selma	309		2	5,200 00	
			309		5,200 00	
	MISSISSIPPI.					
7024	Vicksburgh to Greenwood	260		2	7,500 00	
			260		7,500 00	

C.—*Steamboat service as in operation on the 30th of June, 1874*—Continued.

Number of route.	State and termini.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Remarks.
	LOUISIANA.	*Miles.*	*Miles.*		*Dollars.*	*Dollars.*	
8006	Vicksburgh, Miss., to New Orleans, La	408		3	29,980 00		
8007	Brashear to New Iberia	70		6	12,500 00		
8010	New Orleans to Pilot Town	117		2	7,264 00		
8011	New Orleans to Covington	48		3	4,500 00		
8014	New Orleans to Saint Francisville	170		2	18,000 00		
8103	New Orleans to Grand Isle	96			2,300 00		Twice a week 4 months, once a week 8 months.
8114	Lake Charles to Leesburgh	50		2	4,880 00		
8117	New Orleans to Red River Landing	210		3	5,775 00		
			1,169			85,199 00	
	TEXAS.						
8507	Galveston to Brashear, La	220			50,000 00		Three times a week 6 months, six times a week 6 months.
8508	Galveston to Indianola	130			10,000 00		Twice a week 4 months, three times a week 8 months.
8510	Galveston to Liberty	98		2	8,000 00		
8685	Orange to Wiess Bluff	150		2	9,750 00		
8750	Galveston to Sabine Pass	60		2	5,000 00		
			658			82,750 00	
	ARKANSAS.						
7504	Memphis, Tenn., to White River, Ark	180		3	21,500 00		
7505	White River to Vicksburgh, Miss	229		3	27,000 00		
7506	White River to Pine Bluff	189½		2	10,990 00		
7507	Pine Bluff to Little Rock	105		2	6,000 00		
7509	White River to Jacksonport	356		2	11,800 00		
7510	Jacksonport to Pocahontas	150		2	5,000 00		
7648	Memphis, Tenn., to Friar's Point, Ark	112		3	2,470 00		
			1,314½			84,760 00	
	MISSOURI.						
10516	Saint Louis to Memphis, Tenn	120 330		6 3	26,320 00		
			450			26,320 00	
	TENNESSEE.						
10816	London to Rockwood	45		6	4,000 00		
10817	Rockwood to Chattanooga	110		6	10,500 00		
			155			14,500 00	

9601	Louisville to Cincinnati, Ohio						
9602	Louisville to Evansville, Ind	143		7	9,000 00		
9603	Evansville, Ind., to Cairo, Ill	202		6	15,000 00		
9744	Bowling to Evansville, Ind	200		6	15,000 00		
9771	Paducah to Eastport, Miss	225		1	2,400 00		
		268		2	6,000 00		
			1,038			47,400 00	
	OHIO.						
9061	Portsmouth to Cincinnati	127		3	4,500 00		
9062	Cincinnati to Maysville, Ky	65		3	2,000 00		
9063	Portsmouth to Huntington	51.35		6	7,300 00		
	Huntington to Gallipolis	36.65		3			
			280			13,800 00	
	MICHIGAN.						
12564	Detroit to Sault de Ste. Marie	350		2	1,600 00		During navigation, say 6½ months.
12648	Bay City to Alpena	143		6	8,000 00		April 16 to November 14, in each year.
12802	Grand Haven to Milwaukee, Wis	88		6	2,730 00		During navigation, say 7 months; pay estimated.
12839	Port Huron Railroad Station to Mackinaw	240		3	845 00		Do.
12850	Marquette to Hancock	76		6	13,000 00		May 1 to November 15, in each year.
12867	Cheboygan to Alpena	100		1	590 00		May 1 to November 14, in each year.
			997			26,765 00	
	WISCONSIN.						
13026	Oshkosh to New London	62½		6	1,200 00		May 1 to Nov. 14, in each year; pay estimated.
13136	Berlin to Oshkosh	26		6	800 00		May 1 to November 15, in each year.
13366	Washington Harbor to Green Bay	96		1	170 00		May 1 to November 30, in each year.
			184½			2,170 00	
	CALIFORNIA.						
13712	San Francisco to Petaluma	51		6	4,000 00		
14799	San Francisco to Portland, Oreg	600			25,000 00		Three trips a month.
14873	San Francisco to San Diego	600			25,000 00		Five trips a month.
14882	San Francisco to Sacramento	230		6	8,000 00		
			1,481			62,000 00	
	OREGON.						
15101	Portland to Astoria	53		6	13,000 00		
		69		3			
15102	Portland to The Dalles	120		6	18,000 00		
			242			31,000 00	
	WASHINGTON TERRITORY.						
15406	Olympia to Victoria	66		3	16,235 00		
		108		2			
15412	Seattle to Whatcom	143		1	3,141 00		
15424	Portland, Oreg., to Sitka, Alaska Territory	1,400			34,800 00		Once a month.
15438	Port Townsend to Semiahmoo	151		1	8,500 00		
			1,868			62,676 00	

JOHN L. ROUTT,
Second Assistant Postmaster-General.

D.—*Table showing the increase and decrease* in mail-

	States and Territories.	CELERITY, CERTAINTY, AND SECURITY.				STEAMBOAT.				RAILROAD.			
		Length of routes.		Cost.		Length of routes.		Cost.		Length of routes.		Cost.	
		Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.
		Miles.	*Miles.*			*Miles.*	*Miles.*			*Miles.*	*Mls.*		
1	Maine*	.....	26	$10,315	.....	.....	.....	.....	.....	88	....	$45,263	.....
2	New Hampshire*	.....	176	3,867	.....	4	.....	$83	.....	69	....	21,539	.....
3	Vermont*	.....	118	7,455	.....	.....	.....	.....	.....	.....	†5	20,605	.....
4	Massachusetts*	.....	113	.....	$4,478	.....	.....	.....	.....	128	....	86,270	.....
5	Rhode Island*	.....	36	2,411	.....	.....	‡160	.....	$2,500	22	....	5,112	.....
6	Connecticut*	.....	57	2,472	.....	.....	.....	.....	.....	67	....	12,843	.....
7	New York*	.....	169	63,135	.....	.....	40	751	.....	727	....	432,186	.....
8	New Jersey	.....	22	287	.....	.....	.....	.....	586	79	....	20,920	.....
9	Pennsylvania	37	.....	1,800	.....	.....	.....	.....	.....	33	....	35,180	.....
10	Delaware	.....	6	.....	128	.....	.....	.....	.....	.....	....	535	.....
11	Maryland	.....	111	.....	485	150	.....	5,400	.....	46	....	.....	$2,247
12	West Virginia	194	.....	4,121	.....	.....	.....	.....	1,244	51	....	4,886	.....
13	Virginia	316	.....	8,405	.....	17	.....	607	.....	.....	51	10,852	.....
14	North Carolina	95	.....	1,453	.....	130	.....	2,326	.....	29	....	633	.....
15	South Carolina	117	.....	613	.....	.....	.....	.....	.....	.....	§1	.....	5,333
16	Georgia	391	.....	6,761	.....	.....	.....	.....	.....	252	....	17,418	.....
17	Florida	40	.....	3,302	.....	1,936	.....	38,675	.....	.....	....	.....	3,321
18	Alabama	588	.....	30,343	.....	309	.....	5,200	.....	13	....	10,013	.....
19	Mississippi	569	.....	9,614	.....	.....	237	.....	2,000	106	....	21,196	.....
20	Louisiana	173	.....	14,855	.....	45	.....	2,794	.....	.....	....	.....	.....
21	Texas	481	.....	25,682	.....	60	.....	4,750	.....	273	....	17,458	.....
22	Arkansas	340	.....	24,933	.....	.....	.....	7,167	.....	165	....	7,215	.....
23	Missouri	309	.....	27,516	.....	.....	.....	5,320	.....	320	....	125,831	.....
24	Tennessee	115	.....	4,917	.....	.....	.....	5,250	.....	11	....	3,868	.....
25	Kentucky	131	.....	1,059	.....	.....	20	.....	3,600	18	....	18,308	.....
26	Ohio	.....	405	.....	2,180	1	.....	966	.....	179	....	67,107	.....
27	Indiana	9	.....	2,165	.....	.....	.....	.....	.....	60	....	36,039	.....
28	Illinois	.....	61	.....	826	.....	.....	.....	.....	399	....	159,996	.....
29	Michigan	.....	222	1,875	.....	§1	.....	.....	.....	74	....	.....	146,070
30	Wisconsin	.....	166	.....	2,709	.....	.....	.....	.....	396	....	57,952	.....
31	Iowa	.....	20	658	.....	.....	.....	.....	.....	145	....	61,930	.....
32	Minnesota	35	.....	4,991	.....	.....	.....	.....	.....	309	....	32,438	.....
33	Nebraska	601	.....	13,760	.....	.....	.....	.....	.....	10	....	45,149	.....
34	Kansas	1,352	.....	34,852	.....	.....	.....	.....	.....	.....	§3	23,745	.....
35	Nevada	71	.....	7,683	.....	.....	.....	.....	.....	.....	....	.....	.....
36	California	1,116	.....	37,990	.....	.....	600	.....	30,000	46	....	.....	26,625
37	Oregon	251	.....	5,645	.....	§10	.....	.....	.....	.....	....	.....	.....
38	Washington Ter.	.....	69	.....	8,102	§1	.....	.....	.....	107	....	5,330	.....
39	Idaho Ter	128	.....	4,230	.....	.....	.....	.....	.....	.....	....	.....	.....
40	Montana Ter	19	.....	9,366	.....	.....	.....	.....	.....	.....	....	.....	.....
41	Dakota Ter	302	.....	6,053	.....	.....	.....	.....	.....	.....	....	.....	.....
42	Wyoming Ter	20	.....	364	.....	.....	.....	.....	.....	.....	....	.....	.....
43	Utah Ter	65	.....	.....	2,241	.....	.....	.....	.....	81	....	5,120	.....
44	Colorado Ter	177	.....	3,611	.....	.....	.....	.....	.....	34	....	4,890	.....
45	New Mexico Ter.	240	.....	10,400	.....	.....	.....	.....	.....	.....	....	.....	.....
46	Arizona Ter	498	.....	17,080	.....	.....	.....	.....	.....	.....	....	.....	.....
	Total	8,780	1,777	416,039	21,149	2,664	1,057	79,289	39,930	4,337	60	1,421,827	39,360
		1,777	.....	21,149	.....	1,057	.....	39,930	.....	60	....	89,360	.....
		7,003	.....	394,890	.....	1,607	.....	39,359	.....	4,277	....	1,332,467	.....

* Close of the first year of the new contract-term.

† Route from Rutland, Vt., to Bennington, transferred to New York section.
Erie, Pa., to Cleveland, Ohio, transferred to New York section.
Toledo to Cleveland, transferred to New York section.
Toledo, Ohio, to Chicago, Ill., transferred to New York section.
Toledo, Ohio, to Elkhart, Ind., transferred to Ohio section.

transportation and cost during the year ended June 30, 1874.

ANNUAL TRANSPORTATION—								ANNUAL COST.		
By celerity, certainty, and security.		By steamboat.		By railroad.		Total.		Total.		
Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	
Miles.	*Miles.*	*Miles.*	*Miles.*	*Miles.*	*Miles.*	*Miles.*	*Miles.*			
77, 637	.....	.....	.....	206, 857	.....	284, 494	.....	$55, 578	.....	1
7, 340	.....	.....	5, 044	180, 639	.....	182, 935	.....	25, 489	.....	2
970	.....	.....	.....	.....	9, 640	.....	8, 670	28, 060	.....	3
.....	160, 803	.....	20	163, 746	.....	2, 923	.....	81, 792	.....	4
.....	8, 606	.....	99, 840	.....	9, 732	.....	118, 178	5, 023	.....	5
.....	5, 110	.....	.....	290, 818	.....	285, 708	.....	15, 315	.....	6
261, 737	.....	.....	23, 573	1, 467, 876	.....	1, 706, 040	.....	496, 072	.....	7
5, 202	.....	22, 820	.....	572, 801	.....	600, 823	.....	20, 621	.....	8
608	.....	4, 542	.....	1, 436, 109	.....	1, 641, 259	.....	36, 980	.....	9
.....	1, 716	.....	.....	.....	.....	.....	1, 716	407	.....	10
.....	36, 114	52, 208	.....	.....	68, 646	.....	52, 552	.....	$3, 332	11
67, 444	.....	.....	.....	31, 824	.....	99, 268	.....	7, 763	.....	12
125, 464	.....	3, 744	.....	.....	31, 077	98, 131	.....	19, 864	.....	13
36, 048	.....	18, 200	.....	18, 357	.....	72, 605	.....	4, 412	.....	14
1, 938	.....	.....	.....	19, 698	.....	21, 636	.....	.....	4, 720	15
63, 596	.....	.....	.....	.....	114, 213	.....	50, 617	24, 179	.....	16
30, 736	.....	178, 320	.....	.....	.....	209, 056	.....	38, 696	.....	17
101, 590	.....	64, 272	.....	143, 885	.....	309, 677	.....	45, 556	.....	18
37, 496	.....	2, 392	.....	300, 790	.....	340, 678	.....	28, 810	.....	19
86, 471	.....	45, 240	.....	.....	.....	131, 711	.....	17, 649	.....	20
103, 307	.....	12, 480	.....	125, 664	.....	241, 451	.....	47, 890	.....	21
179, 168	.....	18, 720	.....	80, 415	.....	278, 303	.....	39, 315	.....	22
68, 271	.....	.....	87, 360	55, 077	.....	35, 988	.....	158, 667	.....	23
53, 722	.....	34, 320	.....	134, 601	.....	222, 643	.....	14, 035	.....	24
55, 584	.....	.....	43, 240	13, 191	.....	25, 535	.....	15, 767	.....	25
.....	66, 666	702	.....	.....	‖373, 856	.....	439, 814	65, 893	.....	26
.....	55, 520	.....	.....	87, 757	.....	32, 237	.....	38, 204	.....	27
.....	35, 245	.....	.....	828, 089	.....	792, 844	.....	159, 170	.....	28
.....	29, 330	833	.....	.....	500, 866	.....	529, 363	.....	44, 195	29
.....	51, 916	.....	.....	450, 920	.....	399, 004	.....	55, 243	.....	30
6, 612	.....	.....	.....	85, 217	.....	91, 829	.....	62, 588	.....	31
18, 386	.....	.....	.....	51, 338	.....	69, 724	.....	37, 429	.....	32
146, 172	.....	.....	.....	760, 571	.....	906, 743	.....	62, 909	.....	33
242, 400	.....	.....	.....	2, 421	.....	244, 821	.....	58, 597	.....	34
44, 524	.....	.....	.....	.....	.....	44, 524	.....	7, 683	.....	35
219, 798	.....	.....	72, 000	70, 517	.....	218, 315	.....	.....	18, 439	36
27, 320	.....	3, 120	.....	.....	.....	30, 440	.....	5, 645	.....	37
.....	43, 036	104	.....	66, 518	.....	23, 586	.....	.....	2, 772	38
15, 294	.....	.....	.....	.....	.....	15, 294	.....	4, 230	.....	39
6, 240	.....	.....	.....	.....	.....	6, 240	.....	9, 366	.....	40
66, 513	.....	.....	.....	.....	.....	66, 513	.....	6, 053	.....	41
2, 080	.....	.....	.....	.....	.....	2, 080	.....	364	.....	42
.....	8, 890	.....	.....	58, 765	.....	49, 945	.....	2, 879	.....	43
14, 312	.....	.....	.....	42, 669	.....	56, 981	.....	8, 501	.....	44
24, 960	.....	.....	.....	.....	.....	24, 960	.....	10, 400	.....	45
51, 792	.....	.....	.....	.....	.....	51, 792	.....	17, 080	.....	46
2, 250, 662	502, 876	462, 017	331, 077	7, 947, 130	1, 108, 030	9, 918, 736	1, 200, 910	1, 840, 174	73, 458	
502, 876	.....	331, 077	.....	1, 108, 030	.....	1, 200, 910	.....	73, 458	.....	
1, 747, 786	.....	130, 940	.....	6, 839, 100	.....	8, 717, 826	.....	1, 766, 716	.....	

: Route from Newport, R. I., to New York, N. Y., abandoned by carriers; re-advertised; service to commence July 1, 1874.
§ Corrected distance.

JOHN L. ROUTT,
Second Assistant Postmaster-General.

E.—*Table showing the weight of the mails, the speed with which they are conveyed, the accom on railroad routes in the United States and Territories, the returns having been obtained*

[ABBREVIATIONS.—f. f., fixtures and furniture; f. f. c., fixtures and furniture complete; m. c., mail line; t. l., triple line; q. l., quadruple line; r. a., route-agent; w. t., way trains. A number followed column refer to the order of the routes in this table.]

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
1	N. Y..	1001	1201	New York, Dunkirk	Erie	460	33
2	Mass .	605	605	Boston, Springfield.....	Boston and Albany	101	30
3	N. Y..	1079	1217	Albany, Buffalo.....	New York Cent'l & Hudson River	298	30
4	N. Y..	1002	1211	New York, Troy.....	.....do	150	30
5	N. J ..	2103	.....	New York, New Brunswick	Pennsylvania	36	30
6	Mass .	605	605	Boston, Albany	Boston and Albany	203	30
7	N. J ..	2104	.....	New Brunswick, Philadelphia.	Pennsylvania	54	30
8	N. Y..	1039	1241	Buffalo, Chicago	Lake Shore & Michigan Southern	542	30
9	Pa....	2401	.....	Philadelphia, Pittsburgh....	Pennsylvania	353.6	30
10	Md ...	3501	.....	Baltimore, Philadelphia.....	Philadelphia, Wilmington and Baltimore.	100	30
11	N. Y..	1038	1208	Buffalo, Hornellsville	Erie	91	30
12	Ohio ..	9016	.....	Columbus, Xenia.....	Columbus and Xenia.....	55	25
13	Mass .	605	605	Springfield, Albany.....	Boston and Albany	102	30
14	N. Y..	1035	1207	Attica, Corning	Erie	111	30
15	Pa....	2476	.....	Allentown, Harrisburgh	Philadelphia and Reading	90	25
16	Pa....	2479	.....	Easton, Allentown.....	Lehigh Valley	16.56	25
17	Md ...	3502	.....	Baltimore, Sunbury.....	Northern Central.....	140	25
18	Md. ..	3504	.....	Washington, Wheeling	Baltimore and Ohio	353	30
19	Nebr .	14401	34001	Omaha, Ogden	Union Pacific.....	1,032.2	25
20	Ohio ..	9036	.....	Columbus, Pittsburgh.....	Pittsburgh, Cincinnati & St. Louis	100	30
21	Cal ...	14701	46001	San Francisco, Ogden.....	Central Pacific.....	877½	20
22	N. Y..	1282	1218	Rochester, Niagara Falls....	New York Cent'l & Hudson River	76	30
23	Ohio ..	9022	.....	Toledo, Quincy.....	Toledo, Wabash and Western.....	476	24
24	Ill	11405	23007	Chicago, Burlington	Chicago, Burlington and Quincy..	207.70	29

modations for mails and agents, the trips per week, and the rates of pay per mile per annum, with a view to the re-adjustment of the pay in accordance with the act of March 3, 1873.

catchers; r. p. o., railway post-office; apt., apartment; b. c., baggage-car; s. l., single line; d. l., double by an asterisk (*) shows the equivalent in round trips. The figures in parentheses in the "Remarks"

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
124441	532, 846	1781287	1175109	39, 170	r. p. o., 50 by 9.6, f. f. c., d.l.; r. a. apts., 42 by 11, 26 by 11, 16 by 11, f. f. c., s. l., 66 m.	20½*	$375 00	.....	1
.....	.....	.....	1123264	37, 442	r. p. o., (average,) 30.5 by 8.8, f.-f., q. l.	2	375 00	.....	2
930, 509	325, 221	1255730	971, 381	32, 378	r. p. o., 48 by 9, f. f. c., d. l. to Rochester, 229 m., s. l. residue, 69 m.	34	375 00	.....	3
546, 693	231, 621	1078314	959, 801	31, 992	r. p. o., 48 by 9, f. f. c., d. l...	54	375 00	.....	4
547, 203	324, 321	871, 524	839, 925	27, 997	r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 11 by 8.5, f. f., 2½ l.	65½*	375 00	.....	5
747, 748	582, 633	1330381	820, 974	27, 365	r. p. o., (average,) 30.5 by 8.8, f. f., q. l. to Springfield, 101 m.; d. l. residue, 102 m.	19½*	375 00	102 miles at $300, (13)..	6
538, 460	324, 692	863, 152	817, 821	27, 260	r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 11 by 8.5, f. f., d. l.	33½*	375 00	.....	7
3137614	781, 319	3918933	773, 787	25, 792	r. p. o., 51.6 by 10.9, f. f. c., d. l. 319.7 m., (Buffalo to Elyria, Millbury to Toledo, and Elkhart to Chicago,) with additional r. p. o., 41 by 10.9, f. f. c., s. l. 357.5 m., (Cleveland to Chicago.)	23½*	375 00	Extended from Jan. 1, 1874, 453 miles, covering Ohio routes 9004 and 9021, and Mich. route 12501; weight in Mar., 1874.	8
652, 368	319, 277	971, 645	649, 429	21, 647	r. p. o., 46 by 8.4, f. f. c., s. l.; r. a. apt., 10.9 by 8, f. f. c., s. l.	40½*	375 00	.....	9
183, 798	409, 592	593, 390	517, 454	17, 248	r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 24 by 9, f. f., q. l. to Lamokin, 14½ m., d. l. to Wilmington, 13½ m., and s. l. residue, 72 m.	28½*	375 00	Main route; branch $50, (506.)	10
256, 529	344, 891	601, 420	499, 020	16, 634	r. p. o., 42 by 11, 26 by 11, 16 by 11, (average 28 by 11,) f. f. c., s. l.	22½	375 00	.....	11
96, 327	74, 391	180, 718	175, 342	5, 845	15.6 by 8.6, f. f., s. l	24	325 00	.....	12
.....	.....	.....	533, 357	17, 778	r. p.o.,(average,) 30.5 by 8 8, f. f., d. l.	13	300 00	Part; residue $375, (6) .	13
37, 837	231, 660	369, 497	326, 590	10, 886	42 by 11, 26 by 11, 16 by 11, f. f. c., s. l.	19½	300 00	.....	14
27, 967	44. 101	272, 068	227, 623	7, 587	11.6 by 8.8, f. f., s. l.	21*	300 00	.....	15
96, 299	36, 655	242, 954	224, 703	7, 490	22 by 8.6, f. f., 2½ lines	36*	300 00	.....	16
33, 471	107, 041	240, 512	112, 406	3, 746	r. p. o., 40 by 8.6, f. f., s. l.; r. a. apt., 14.6 by 8.6, f. f., s. l.	18	300 00	.....	17
14, 221	187, 627	531, 848	342, 102	11, 403	r. p. o., 52.4 by 8.9, f. f., d. l. to Grafton, 254 m., s. l. res., 99 m.; r. a. apt., 17 by 8.7½, f. f., s. l. between Grafton and Wheeling, 99 m.	18*	285 00	.....	18
3, 302	91, 389	374, 751	328, 897	10, 963	r. p. o.,(say) 50 by 9, f. f.c.,s.l.	7	275 00	r. p. o., with platforms, &c., 54.5 by 9.9.	19
2, 342	167, 340	249, 722	222, 876	7, 425	15 by 8.6, f. f. and m. c., s. l..	23	275 00	Maine route; branch $50, (509.)	20
7, 756	220. 120	357, 906	158, 896	5, 296	r. p. o., 48 by 9.5½, f. f. c., s. l.	7	275 00	.....	21
5, 618	54, 310	149, 928	121, 545	4, 051	r. p. o., 48 by 9, t. f. c., s. l ...	24	250 00	.....	22
4. 191	162, 683	456, 874	231, 032	7, 701	r. p. o., 36 by —, 198 m, 50.8 by —, 278 m., f. f., s. l.	12	225 00	Main route; branches $75, $55, (272, 341.)	23
9, 336	84, 255	383, 591	229, 392	7, 643	r. p. o., (say) 50 by 9, f. f. c., s.l	20¼*	225 00	Main route; branches $50, (456, 557;) r. p. o., with platforms, 58 by 9; weight in Nov., 1873; company report r. p. o., 55.6 by 9.6, f. f. c., from Mar. 30, 1874.	24

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
25	Va....	4403	.....	Alexandria, Lynchburgh....	Washington City, Virginia Midland & Great Southern, (late Orange, Alexandria & Manassas.)	171	21
26	Ill	11405	23007	Chicago, Burlington.....	Chicago, Burlington and Quincy..	207. 70	36½
27	Tenn {	10001 / 10002	19002	Bristol, Chattanooga	East Tennessee, Virginia&Georgia	242. 7	18½
28	Va....	4414	.....	Lynchburgh, Bristol	Atlantic, Mississippi and Ohio ...	205	19
29	Ohio ..	9046	.....	Cleveland, Cincinnati	Cleveland, Columbus, Cincinnati and Indianapolis.	245. 25	28
30	Ohio ..	9031	.....	Cincinnati, Xenia.....	Little Miami.....	65. 96	25
31	Ohio ...	9031	.....	Cincinnati, Springfield.....	.....do	84. 96	25
32	Ill	11404	23015	Chicago, Davenport.....	Chicago, Rock Island and Pacific	163	23½
33	Mass .	601	601	Boston, Portsmouth.....	Eastern.....	56½	34
34	Ill	11403	23003	Chicago, Clinton	Chicago and Northwestern.....	139	34
35	Ill ...	11403	23003	Chicago, Council Bluffs	.....do	490	34
36	Ill	11403	23003	Clinton, Council Bluffs	.....do	351	34
37	Va....	4401	.....	Washington, Richmond	Richmond, Fredericksburgh and Potomac.	131	30
38	Tenn .	10004	19004	Stevenson, Chattanooga.....	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga.)	39	25
39	Minn .	13513	26013	Saint Paul, Winona.....	Chicago, Milwaukee & St. Paul, (late Milwaukee & St. Paul.)	103. 54	25
40	Iowa..	11003	27005	Burlington, East Plattsmouth	Burlington and Missouri River...	279. 14	31½
41	Ill	11406	23017	Chicago, East Saint Louis ..	Chicago and Alton.....	283	30
42	Ohio ..	9017	.....	Columbus, Indianapolis	Columbus, Chicago and Indiana Central.	188	25
43	Ohio ...	9018	.....	Galion, Indianapolis.....	Cleveland, Columbus, Cincinnati and Indianapolis.	204	28
44	La....	8002	.....	New Orleans, Canton.....	New Orleans, Jackson, and Great Northern.	206	19
45	Miss..	7001	.....	Canton, Jackson	Southern Railroad Association...	237	9
46	Mass .	608	608	Boston, Providence	Boston and Providence.....	44	28
47	Vt....	482	406	Rutland, Burlington	Central Vermont, (late Rutland and Burlington.)	67½	25
48	Vt....	482	406	Bellows Falls, Burlington...	.....do	119½	22
49	Me ...	114	124	Portland, Portsmouth.....	Eastern, (late Portland, Saco & Portsmouth.)	53	21
50	W. V	4102	.....	Grafton, Parkersburgh.....	Baltimore and Ohio	104	27
51	Mo ...	10505	28005	Quincy, Saint Joseph	Hannibal and Saint Joseph	203½	25
52	Mass..	604	604	Boston, Fitchburgh.....	Fitchburgh	52	30
53	Mo ...	10504	28004	Saint Louis, Moberly	Saint Louis, Kansas City and Northern, (late North Missouri.)	146½	22
54	Ill	11921	23035	Chicago, Milwaukee	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	88. 85	27
55	Ky ...	9608	20005	Louisville, Nashville.....	Louisville and Nashville.....	186. 6	29
56	Mich..	12506	24005	Detroit, Chicago.....	Michigan Central.....	285. 35	27

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
186, 830	62, 243	249, 073	211, 786	7, 059	r. p. o., 42.3 by —, f. f. c., s. l.	13	$225 00	Main route; branch $50, (624.)	25
264, 714	86, 234	350, 948	207, 509	6, 916	r. p. o., (say) 50 by 9, f. f. c., s. l.	20½*	225 00	Main route; branches $50, (456, 557,) r. p. o., with platforms, 58.6 by 9; in Oct., 1873.	26
163, 010	65, 229	228, 239	196, 454	6, 548	r. p. o., 40.6 by 9.6, f. f., s. l. ..	14	225 00	Main route; branch $100, (157.)	27
158, 399	59, 894	218, 293	189, 982	6, 332	r. p. o., 40.5 by 9, f. f. c., s. l..	14	225 00	.....	28
240, 107	115, 267	355, 374	178, 916	5, 964	r. p. o., 39.2 by 9.2, f. f. c., s. l.	12	225 00	.....	29
.....	.....	.....	175, 706	5, 856	15.6 by 8.6, f. f., s. l	24	225 00	Part; res. $100, (31) ...	30
82, 592	117, 901	200, 493	135, 097	4, 503	.....do.....	24	225 00	19 miles at $100, (30) .	31
258, 644	37, 531	296, 175	278, 830	9, 293	r. p. o., (say) 40 by 10, s. l. to Geneseo, 159 m., d. l. res., 24 m.	12	200 00	r. p. o., with platforms, 46.6 by 10.	32
194, 990	116, 293	311, 283	260, 091	8, 669	r. p. o., 40 by 8.9, f. f., d. l.; r. a. apt., 22 by 9, f. f., ½ l.	30½*	200 00	.....	33
204, 502	47, 304	251, 896	233, 811	7, 793	r. p. o., (say) 50 by 10, f. f., s. l.	19½*	200 00	Part; res. $200, (36,) r. p. o., with platforms, 56 by 10.	34
.....	.....	.....	203, 150	6, 771	.....do.....	18½*	200 00	r. p. o., with platforms, 56 by 10.	35
178, 627	68, 348	246, 975	191, 076	6, 369	.....do.....	18	200 00	Part; res. $200, (34;)r. p. o., with platforms, 56 by 10.	36
141, 489	51, 791	193, 280	185, 399	6, 180	r. p. o., 43 by —, f. f. c., d. l ..	13	200 00	.....	37
.....	.....	.....	131, 416	4, 380	r. p. o., 23 by 9.10, f. f. c., s. l.; r. a. apt., 12.6 by 8.9, f. f., s. l.	12½*	200 00	Part; res. $150, (91,) branch $40, (655.)	38
39, 778	96, 958	136, 734	117, 724	3, 925	r. p. o., (say) 40 by 10.3, f. f. c., s. l.	12	200 00	r. p. o., with platforms, 46 by 10.3.	39
124, 184	48, 712	172, 896	113, 081	3, 769	r. p. o., 42 by 8.6, f. f. c., s. l..	12	200 00	In Nov., 1873; company report r. p. o. 50 by 9, f. f. c., from Apr. 6, 1874.	40
128, 919	96, 101	225, 020	105, 571	3, 519	r. p. o., 32 by 10, f. f. c., and m. c ; s. l.; r. a. apt., 24 by 10, f. f. c., s. l. 28.8 m.	18½*	200 00	In May, 1874; 45 feet r. p. o. to be furnished.	41
75, 178	49, 433	124, 611	88, 968	2, 965	12 by 9, f. f., s. l	20	200 00	.....	42
116, 318	42, 981	159, 299	75, 575	2, 519	r. p. o., 39.2 by 9.2, f. f. c., s. l.	12	200 00	.....	43
41, 082	63, 772	104, 854	67, 607	2, 253	r. p. o., 46 by 9.10, f. f., s. l....	13	200 00	.....	44
34, 703	70, 545	105, 248	64, 509	2, 150	.....do.....	13	200 00	.....	45
38, 099	23, 840	61, 939	31, 792	1. 059	No apt.; no r. a	20½*	200 00	.....	46
.....	.....	.....	118, 611	3, 953	25 by 9.3, f. f., s. l	15*	181 81	Part; residue $100, (144.)	47
91, 697	65, 136	156, 833	98, 341	3, 277	.....do	15*	180 81	52 miles at $100, (144.)	48
93, 322	150, 866	244, 188	230, 925	7, 683	r. p. o., 40 by 8.9, f. f., d. l.; r. a. apt., 22 by 9, f. f., ½ l.	24	175 72	.....	49
197, 271	99, 001	296, 272	272, 900	9, 096	r. p. o., 52.4 by 8.9, f. f., d. l	14	175 00	In August, 1874.....	50
172, 318	82, 676	254, 994	180, 623	6, 020	r. p. o., 40 by 9.10, s. l	13	175 00	Main route; branch $175, (65.)	51
119, 486	86, 671	206, 157	173, 694	5, 789	r. p. o., 25 by 8, 15 by 7, 12 by 7, 12 by 6.9, 11 by 6.6, (average, 15 by 7,) f. f., s. l ..	18	175 00	.....	52
.....	.....	.....	150, 807	5, 026	24 by 7.6, f. f., s. l., 2 agents 58 m.	19½*	175 00	Part; residue $175, (64)	53
103, 810	31, 407	135, 217	136, 737	4, 558	No r. a	18	175 00	.....	54
148, 330	57, 314	205, 644	127, 573	4, 252	r. p. o., 31.8 by 9.3, f. f., s. l.: apt. in b. c., 14.10 by 7.6, in charge of baggage-master.	34½*	175 00	.....	55
130, 946	119, 425	250, 371	119, 175	3, 972	r. p. o., (say) 45 by 10.6, s. l.	33½*	175 00	r. p. o., with platforms, 51.8 by 10.6.	56

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
57	Mo ...	10504	28004	Saint Louis, Kansas City...	Saint Louis, Kansas City and Northern, (late North Missouri.)	271. 75	22
58	Vt	461	403	Windsor, Burlington.....	Central Vermont, (late Vermont Central.)	119	24
59	Ohio ..	9030	.....	Cincinnati, Hamilton	Cincinnati, Hamilton and Dayton	26. 53	30
60	Iowa..	11003	27005	Burlington, East Plattsmouth	Burlington and Missouri River ..	279. 14	22½
61	Wis ..	13001	25009	Chicago, Green Bay.....	Chicago and Northwestern	245	24
62	Ill	11401	23001	Chicago, Milwaukee	.....do	87	24
63	Vt	412	401	Burlington, Rouse's Point...	Central Vermont, (late Vermont Central & Vermont & Canada.)	55. 50	22
64	Mo ...	10504	28004	Moberly, Kansas City.....	St. Louis, Kansas City and Northern, (late North Missouri.)	125½	22
65	Mo ...	10505	28005	Palmyra, Hannibal	Hannibal and Saint Joseph	15	22
66	Ala ...	6612	.....	Mobile, Montgomery.....	Mobile and Montgomery.....	179	17
67	Ill ...	11417	23010	Galesburgh, Quincy.	Chicago, Burlington and Quincy	100	22
68	Ind ...	12003	22003	Indianapolis, Cincinnati	Indianapolis, Cincinnati and La Fayette.	113½	20
69	Ind ...	12028	22028	La Fayette, Kankakee.....	Cincinnati, La Fayette & Chicago	57. 35	25
70	Ind ...	12005	22005	Indianapolis, La Fayette ...	Indianapolis, Cincinnati and La Fayette.	65½	20
71	Iowa..	11005	27014	Davenport, Missouri River .	Chicago, Rock Island & Pacific	318	30
72	N. H..	251	251	Concord, Nashua.....	Concord	36	30
73	Mass .	702	648	Springfield, South Vernon Junction.	Connecticut River	50	25
74	Ky ...	9607*a*	20004	Covington, Louisville	Louisville, Cincinnati and Lexington.	109½	25
75	Mass .	603	603	Boston, Nashua	Boston and Lowell and Nashua and Lowell.	42	25
76	Wis ..	13005	25002	Milwaukee, La Crosse	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	198	25
77	Kans .	14001	33001	Kansas City, Cheyenne	Kansas Pacific.....	745	20
78	Ill	11402	23002	Chicago, Freeport	Chicago and Northwestern.....	121	24
79	Mo ...	10512	28011	Sedalia, Denison	Missouri, Kansas and Texas....	447	22½
80	Conn .	936	904	New Haven, New London ..	New York, New Haven and Hartford.	50	25
81	Pa	2422	.....	Sunbury, Williamsport.....	Pennsylvania.....	39. 3	25
82	Mass..	602	602	Boston, South Berwick Junction.	Boston and Maine.....	75	30
83	Ala ...	6605	.....	Memphis, Stevenson	Memphis and Charleston	271. 50	20
84	Tenn .	10004	19004	Nashville, Chattanooga	Nashville, Chattanooga & Saint Louis, (late Nashville and Chattanooga.)	153	22
85	Ill	11426	23023	Decatur, St. Louis	Toledo, Wabash and Western....	112	25
86	Ky....	9611	20008	Bowling Green, Guthrie	Louisville and Nashville, (late Paducah and Gulf.)	51	20
87	Ohio ..	9030	.....	Hamilton, Dayton	Cincinnati, Hamilton and Dayton	33. 92	30
88	Ohio ..	9007	.....	Cleveland, Wellsville	Cleveland and Pittsburgh.....	102. 36	30
89	Mass.	602	602	Boston, Portland.....	Boston and Maine.....	119. 18	30
	Me ..	221	221				
90	Tenn .	10010	19010	Memphis, Paris.....	Louisville and Nashville & Great Southern, (late Louisville and Nashville.)	132. 50	25

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
138, 860	55, 863	194, 723	112, 081	3, 736	24 by 7.6, f. f., s. l., 2 agents 58 m.	19⅝*	$175 00	.....	57
179, 238	153, 488	332, 726	112, 026	3, 734	r. p. o., 24 by 9.7, 25 by 9.7, f. f. c., s. l. 93 m.; r. a. apt., 25 by 9.3, 13.7 by 9.7, f. f., s. l. residue, 26 m.	12½*	175 00	....	58
79, 879	37, 999	117, 878	110, 048	3, 669	12 by 8, f. f., d. l.	43*	175 00	Part; residue $150, (87.)	59
109, 395	52, 845	162, 240	103, 376	3, 445	r. p. o., 42 by 8.6, f. f. c., s. l.	12	175 00	Main route; branch $50, (431.) In October, 1873.	60
143, 752	67, 352	211, 104	98, 919	3, 297	r. p. o., (say) 50 by 10, f. f. c., s. l.	14½*	175 00	r. p. o., with platforms, 56 by 10.	61
84, 291	40, 579	124, 870	97, 923	3, 263	r. p. o., 42.6 by 10, d. l.	24	175 00	.....	62
150, 690	106, 186	256, 876	96, 163	3, 205	r. p. o., 24 by 9.7, 25 by 9.7, f. f. c., s. l. 24.50 m.; r. a. apt., 25 by 9.3, 13.7 by 9.7, f. f., s. l. residue, 31 m.	14½*	175 00	.....	63
.....	.....	.....	68, 728	2, 290	24 by 7.6, f. f., s. l.	19	175 00	Part; residue $175, (53.)	64
2, 612	13, 457	16, 069	15, 955	532	b. c.; no r. a.	19	175 00	Branch; main route $175, (51.)	65
40, 359	38, 770	79, 129	68, 872	2, 296	10.3 by 8.8½, f. f., s. l.	7	160 00	.....	66
59, 295	28, 561	87, 856	67, 542	2, 220	r. p. o., (say) 50 by 9, f. f. c., s. l.	18	160 00	r. p. o., with platforms, 58.6 by 9.	67
78, 415	167, 822	246, 237	217, 246	7, 241	r. p. o., 50 by —, f. f. c., s. l.; r. a. apt., 12 by 7.5, f. f., s. l.	19	150 00	.....	68
124, 019	86, 703	210, 722	204, 191	6, 806	r. p. o., 50 by 10, f. f. c., s. l.; r. a. apt., 10 by 8, 8 by 8, f. f., s. l	13	150 00	.....	69
139, 063	82, 720	221, 783	203, 934	6, 797	r. p. o., 50 by —, f. f. c., s. l.; r. a. apt., 12 by 7.5, f. f., s. l.	19	150 00	.....	70
215, 924	74, 596	290, 580	198, 455	6, 614	r. p. o., (say) 40 by 10, d. l. to Iowa City, 54 m., s. l. residue, 264 m.	12	150 00	r. p. o., with platforms, 46.6 by 10.	71
93, 191	129, 154	222, 345	174, 490	5, 816	r. p. o., 22.3½ by 6.11, f. f., s. l.; r. a. apt., 17 by 7, 12 by 6.8, f. f., d. l. 18 m.	33*	150 00	.....	72
103, 436	91, 444	194, 880	164, 988	5, 499	r. p. o., 23.4 by 6.5, 20.9 by 6.9½, f. f., d. l.	16½*	150 00	.....	73
137, 547	69, 201	206, 748	164, 281	5, 476	10 by 7.3, f. f., s. l.	20	150 00	.....	74
119, 275	73, 594	183, 869	162, 795	5, 426	22 by 9.6, f. f. and m. c., s. l.	18	150 00	.....	75
47, 774	53, 310	201, 084	157, 766	5, 257	r. p. o., (say) 40 by 10.3, s. l.	12	150 00	r. p. o., with platforms, 46 by 10.3.	76
33, 956	135, 611	369, 567	133, 719	4, 457	44 3 by 10.6, f. f., s. l.	9½*	150 00	Main route; branch $85, (205.)	77
98, 895	45, 740	154, 635	129, 309	4, 309	r. p. o., 43.4 by 10, s. l.	12	150 00	....	78
15, 965	48, 775	164, 740	120, 896	4, 029	r. p. o., 51.2 by 9.10, f. f., s. l.	7	150 00	In June, 1874	79
81, 424	41, 782	123, 206	111, 485	3, 716	12.6 by 6.9, f. f. c. and m. c., s. l., and r. a. in b. c.	28	150 00	.....do	80
.....	.....	.....	82, 773	2, 759	r. p. o., 40 by 9.6, 45 by 9.6, f. f. c., s. l.; r. a. apt. 8.10 by 5.7, f. f., d. l.	18	150 00	Part; residue $100, (161.)	81
.....	.....	.....	82, 098	2, 736	13 by 6.10, f. f., d. l.	12	150 00	Main route; branch $50, (452.)	82
57, 906	93, 611	131, 517	78, 868	2, 629	r. p. o., 23 by 9.10, f. f. c., s. l.	14	150 00	Main route; branches $50, $30.	83
52, 428	89, 220	151, 648	75, 768	2, 525	12 6 by 8.9, f. f., s. l.	10½*	150 00	Main route; branch $40, (655;) 39 miles at $200.	84
58, 970	28, 776	87, 746	75, 560	2, 518	12 by —, f. f., s. l.	12	150 00	.....	85
59, 168	16, 892	76, 060	71, 982	2, 399	14.10 by 7.6, f. f., s. l.	19	150 00	.....	86
2, 513	27, 245	69, 758	65, 328	2, 178	12 by 8, f. f., s. l.	28*	150 00	Part; residue $175, (59.)	87
6, 207	58, 961	125, 168	64, 216	2, 140	13 by 9, f. f., s. l.	15*	150 00	.....	88
2, 485	85, 061	197, 546	61, 216	2, 040	13 by 6.10, f. f., d. l.	12	150 00	Pay fixed only on the 75 miles next to Boston.	89
3, 964	64, 553	98, 517	56, 787	1, 892	13.6 by 7.6, f. f., s. l.	13	150 00	.....	90

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
91	Tenn	10004	19004	Nashville, Stevenson	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga.)	114	25
92	Ind	12007	22007	New Albany, Indianapolis	Jeffersonville, Madison and Indianapolis.	114	27
93	Wis	13004	25001	Milwaukee, North McGregor	Chicago, Milwaukee and Saint Paul, (late Milwaukee & Saint Paul.)	197. 90	25
94	Ind	12004	22004	Indianapolis, Kokomo	Indianapolis, Peru and Chicago	54	30
95	La	8001	.....	New Orleans, Brashear City	Morgan's Louisiana and Texas	83	21
96	Ind	12004	22004	Indianapolis, Peru	Indianapolis, Peru and Chicago	78	29
97	Mass	677	641	Taunton, Mansfield Junction	New Bedford, (late Taunton Branch.)	12	33
98	Minn	13504	26009	Minneapolis, North McGregor.	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	215. 70	25
99	Cal	14707	46006	Sacramento, San Francisco	California Pacific	83	20
100	Ind	12009	22009	Richmond, Chicago	Pittsburgh, Cincinnati and Saint Louis.	225¼	30
101	Vt	487	407	Brattleborough, Bellows Falls.	Central Vermont, (late Vermont Valley.)	24	25
102	Vt	481	405	Bellows Falls, Windsor	Central Vermont, (late Sullivan)	25	21
103	N. H	254	253	Concord, White River Junction.	Northern	69	27
104	Mo	10506	28006	Kansas City, Council Bluffs	Kansas City, Saint Joseph and Council Bluffs.	203	21
105	Mo	10510	28010	Kansas City, Cameron	Hannibal and Saint Joseph	54	22
106	Me	9	2	Portland, Bangor	Maine Central	122. 26	24
107	Me	181	9	Bangor, New Brunswick	Consolidated European and North American.	118½	24
108	N. Y	1027	1213	Syracuse, Rochester	New York Central and Hudson River.	104	3
109	Mass	609	609	Boston, Plymouth	Old Colony and Newport	38	3
110	Ohio	9027	.....	Dayton, Toledo	Dayton and Michigan	142. 96	30
111	Me	116	6	Portland, South Paris	Grand Trunk	48	21
112	R. I	802	802	Providence, New London	Stonington and Providence	63¾	25
113	Va	4407	.....	Richmond, Greensborough	Richmond and Danville	190¼	1
114	N. C	5004	.....	Charlotte, Greensborough	do	93	1
115	Pa	2402	.....	Philadelphia, Pottsville	Philadelphia and Reading	92. 5	22½
116	N. Y	1017	1259	Troy, North Adams	Troy and Boston	50	25
117	Ohio	9015	.....	Columbus, Delaware	Cleveland, Columbus, Cincinnati and Indianapolis.	24. 75	25
118	S. C	5606	.....	Charleston, Savannah	Savannah and Charleston	104	1
119	Ga	6003	.....	Atlanta, West Point	Atlanta and West Point	86½	20
120	Ala	6601	.....	Montgomery, West Point	Western, of Alabama	88. 50	1
121	Ohio	9003	.....	Rochester, Bellaire	Cleveland and Pittsburgh	68¾	30
122	Ga	6004	.....	Millen, Augusta	Central Railroad and Banking Co.	53¼	17. 5
123	S. C	5605	.....	Kingsville, Augusta	South Carolina	119	1
124	N. Y	1017	1259	Hoosac Junction, State Line.	Troy and Boston	5½	25
125	Mass	689	645	Fitchburgh, Bellows Falls	Cheshire and Ashuelot	64	2
126	N. Y	1023	1258	Rouse's Point, Canada Line.	Champlain and Saint Lawrence	2¼	15
127	Ill	11407	23020	Chicago, Cairo	Illinois Central	365	2
128	N. Y	1026	1227	Rome, Ogdensburgh	Rome, Watertown and Ogdensburgh.	142	3
129	N. Y	1026	1227	De Kalb Junction, Potsdam Junction.	do	25	2
130	N. Y	1338a	1250	Fredonia, Dunkirk	Dunkirk and Fredonia	3¼	
131	Me	115	5	Portland, Augusta	Maine Central, (late Portland and Kennebeck.)	64	2

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
.....	.....	.....	56, 170	1, 872	12.6 by 8.9, f. f., s. l.	9*	$150 00	Part; residue $200,(38;) branch $40, (655.)	91
25, 950	42, 583	68, 533	50, 148	1, 671	13 by 7.4, f. f., s. l	18	150 00	.....	92
61, 352	33, 718	95, 070	46, 255	1, 541	23 by 10, f. f., s. l	12	150 00	.....	93
.....	.....	.....	33, 965	1, 132	12 by 8, f. f., s. l	18	150 00	Part; residue $75,(252.)	94
20, 062	14, 701	34, 763	31, 214	1, 040	14.7 by 6.5, f. f., s. l	6	150 00	.....	95
20, 810	23, 088	43, 898	29, 607	986	12 by 8, f. f., s. l	18	150 00	24 miles at $75.	96
13, 163	15, 716	28, 879	28, 090	936	No apt.; no r. a	36½	150 00	.....	97
44, 300	43, 617	87, 917	25, 647	854	27 by 10.3, f. f., s. l	6½*	150 00	.....	98
17, 736	18, 224	35, 960	24, 870	829	10 by 8.10, f. f., s. l	7	150 00	Main route; branch $75, (284)	99
20, 258	21, 533	41, 791	15, 873	529	12 by 8.6, f. f., s. l	6	150 00	.....	100
77, 385	69, 264	146, 650	144, 256	4, 808	22.6 by 9.3, f. f., d. l	12	140 00	.....	101
83, 554	68, 708	152, 262	143, 164	4, 772	22.6 by 9.3, f. f., d. l	12	140 00	.....	102
78, 592	56, 593	135, 485	117, 906	3, 930	r. p. o., 22.3½ by 6.11, f. f., s. l	18	140 00	Main route; branch $50, (522.)	103
55, 000	37, 849	92, 849	46, 832	1, 561	r. p. o., 24.10½ by 9.1½, 22.9 by 8.8, f. f. c., s. l.	12	140 00	Main route; branch $50, (413.)	104
120, 340	54, 113	174, 453	168, 537	5, 618	r. p. o., 40 by 9.10, s. l	13	125 00	.....	105
120, 275	73, 647	193, 922	108, 767	3, 625	16 by —, f. f., s. l. to Waterville, 55 m.; r. p. o., 42 by 9, f. f., d. l. res., 55 m.	9*	125 00	.....	106
74, 203	46, 804	121, 007	103, 765	3, 458	18 by 7, f. f., s. l	9*	125 00	.....	107
76, 301	72, 139	148, 440	65, 018	2, 167	14.6 by 8.6, f. f. c., & b. c., s. l	21½	125 00	.....	108
108, 836	71, 322	180, 158	60, 983	2, 032	12.6 by 9, f. f. & m. c., d. l. 11.28 m.; no r. a. res.	23½*	125 00	.....	109
58, 832	38, 208	97, 040	59, 032	1, 967	12 by 8, f. f., s. l	18	125 00	.....	110
.....	.....	.....	115, 131	1, 918	23 by 8, f. f., s. l	12	125 00	Part; residue $100, (149,) 60 days, in October, 1873, and February, 1874.	111
25, 707	49, 587	75, 294	56, 997	1, 899	11 by 6, f. f., s. l	22½*	125 00	.....	112
55, 658	18, 955	74, 613	51, 772	1, 725	18.4 by 8.6, f. f., s. l	16*	125 00	.....	113
.....	.....	.....	45, 590	1, 519	21 by 8, f. f., s. l	14	125 00	Part; residue $82.11, (213.)	114
55, 708	38, 131	93, 839	45, 076	1, 502	15 by 8.8, 11.6 by 8.8., f. f., s. l	14½*	125 00	.....	115
52, 249	33, 242	85, 491	42, 616	1, 420	15.2 by 6.8, f. f., s. l	20½*	125 00	Main route; branch $125, (124.)	116
29, 015	16, 097	45, 112	42, 256	1, 408	b. c.; no r. a	12	125 00	.....	117
30, 371	12, 575	42, 946	26, 896	1, 229	8 by 6, f. f., s. l	13	125 00	In April, 1874	118
28, 312	11, 753	40, 065	34, 264	1, 142	18.6 by 8.9, fixtures, s. l	7	125 00	.....	119
17, 318	29, 617	46, 935	33, 751	1, 125	18.4 by 8.8, f. f., s. l	7	125 00	.....	120
35, 293	30, 486	66, 379	29, 528	984	13 by 9, f. f., s. l	18	125 00	.....	121
8, 830	10, 775	19, 605	17, 498	583	8.2 by 7, f. f., s. l	14	125 00	.....	122
13, 346	10, 417	23, 763	8, 220	274	16.2 by 8.2, f. f., & l	13	125 00	Main route; branches $75, (265,) $60, (322,) $50, (576.)	123
4, 941	1, 586	6, 527	5, 979	199	No r. a	6	125 00	Branch; main route $125, (116.)	124
6, 321	38, 876	95, 197	81, 643	2, 721	24 by 8.8, fixtures, s. l	18	117 18	.....	125
967	430	1, 397	1, 397	47	b. c.; no r. a	6	116 66	.....	126
9, 027	150, 150	299, 177	88, 231	2, 940	r. p. o., 50 by 10, 26.8 by 9, f. f., d. l. to Kankakee, 55 m., s. l. res., 3.10 m.	12	115 35	.....	127
9, 002	40, 468	110, 470	52, 826	1, 760	23 by 9, 23,6 by 7, fixtures, s. l	15	115 00	Main route; branch $115, (129.)	128
1, 371	7, 811	19, 382	10, 907	363	No r. a	12	115 00	Branch; main route $115, (128.)	129
3, 322	4, 346	7, 668	7, 668	255	No apt.; street car	27*	114 28	.....	130
9, 427	74, 911	185, 338	122, 629	4, 087	r. p. o., 42 by 9, f. f. c., s. l.; r. a. apt., 16 by —, f. f. c., s. l.	12	113 35	Main route; branch $113.35, (132.)	131

E.—*Table showing the weight of mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
132	Me ...	115	5	Brunswick, Bath.....	Maine Central, (late Portland and Kennebeck.)	9	22
133	Ala...	6613	.....	Mobile, New Orleans.....	New Orleans, Mobile, and Texas.	140	40
134	Ohio ..	9029	.....	Hamilton, Richmond.....	Cincinnati, Hamilton and Dayton	45.1	30
135	Me ...	221	221	Salmon Falls, Portland.....	Boston and Maine.....	44.	18 30
136	Ga...	6009	.....	Savannah, Macon	Central Railroad and Banking Co	192½	21
137	Del ...	3401	.....	Wilmington, Delmar.....	Philadelphia, Wilmington and Baltimore.	96.	92 22
138	N. J ..	2105	.....	Philadelphia, New York	Pennsylvania.....	93	30
139	N. J ..	2105	.....	Bordentown, Trenton	.....do	6	30
140	Mass .	690	744	Miller's Falls, Brattleborough	Central Vermont, (late Vermont and Massachusetts.)	21	21
141	Vt	452	402	White River Junction, Derby Line.	Connecticut and Passumpsic Rivers and Massawippi Valley, (late Connecticut & Passumpsic Rivers.)	114.	17 25
142	Mass .	690	646	Fitchburgh, Hoosac Tunnel.	Vermont and Massachusetts	87	21
143	Mich	12502	24001	Toledo, Detroit	Lake Shore & Michigan Southern	64.	75 22
144	Vt ...	482	406	Bellows Falls, Rutland.....	Central Vermont, (late Rutland and Burlington.)	52	22½
145	Tenn .	10009	19009	Guthrie, Paris	Memphis, Clarksville and Louisville.	82½	25
146	Mass .	663	637	Middleborough, Hyannis....	Cape Cod	47	30
147	Mass .	627	622	Lawrence, Manchester.....	Manchester and Lawrence	28	25
148	Me ...	116	6	Portland, Canada Line.....	Grand Trunk	165	21
149	Me ...	116	6	South Paris, Canada Line...	.....do	117	21
150	N. H..	253	252	Concord, Wells River.....	Boston, Concord and Montreal...	93	25
151	Ill	11418	23021	Dubuque, Centralia.....	Illinois Central	344	22
152	Conn .	926	902	New London, Willimantic ..	Central Vermont, (late Vermont Central.)	30	22
153	Md ...	3514	.....	Baltimore, Washington.....	Baltimore and Potomac.....	426	25
154	Vt	1582	525	Ticonderoga, Leicester Junction.	Central Vermont, (late Vermont Central and Vermont and Canada.)	14½	15
155	Ala ...	6604	.....	Montgomery, Calera.....	South and North Alabama.....	63.	8 25
156	Pa	2422	.....	Sanbury, Erie.....	Pennsylvania	227.	6 20
157	Tenn .	10002	19002	Cleveland, Dalton.....	East Tennessee, Virginia and Georgia.	92½	16½
158	N. J..	2110	.....	Philadelphia, Bridgeton....	West Jersey.....	38.	40 25
159	Ill	11416	23018	Bloomington, Godfrey	Chicago and Alton.....	132	24
160	Pa	2404	.....	Philadelphia, Bethlehem....	North Pennsylvania	54.	6 30
161	Pa	2422	.....	Williamsport, Erie.....	Pennsylvania.....	247.	8 20
162	Mass .	670	638	Yarmouthport, Wellfleet....	Cape Cod	31	25
163	Iowa..	11007	27021	Dubuque, Sioux City.....	Illinois Central	327.	12 25
164	Mass .	683	643	Worcester, Nashua	Worcester and Nashua	46.	25 22½
165	Mich .	12507	24006	Detroit, Grand Haven	Detroit and Milwaukee.....	190	25
166	Pa	2410	.....	Allentown, Waverly.....	Lehigh Valley	188.	5 25
167	Mo ...	10502	28002	Saint Louis, Columbus.....	Saint Louis and Iron Mountain and Cairo and Fulton.	197	25
168	Miss ..	7003	.....	Vicksburgh, Jackson	Vicksburgh and Meridian.....	43.	5 18
169	Ill	11422	23030	East Saint Louis, Du Quoin.	Saint Louis, Alton and Terre Haute.	71.	80 22½

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
20,664	11,725	32,393	32,393	1,079	12 by —, t. l	18	$113 35	Branch; main route $113.35, (131.)	132
22,796	30,348	53,144	48,006	1,600	17 by 7, f. f, s. l.; (space in through mail-car 18 by 5.)	14	110 00		133
33,951	11,494	45,445	40,910	1,363	12 by 8, f. f., s. l	12	110 00		134
21,721	17,287	39,008	30,523	1,017	13 by 6.10, f. f., d. l	12	110 00		135
23,754	25,903	49,657	18,135	604	8.2 by 7, f. f., s. l	14	110 00		136
41,269	22,209	63,478	33,009	1,100	24 by 9, f. f., d. l	12	109 59		137
16,286	12,688	28,974	9,836	327	8 by 6.6, fixtures, s. l	8½*	103 00	Main route; branch $103, (139.)	138
1,168	1,791	2,959	2,959	98	.....do	12	103 00	Branch; main route $103, (138.)	139
99,360	95,384	194,744	111,366	3,712	15 by 7, f. f., d. l	18	100 00		140
64,114	51,106	115,220	84,294	2,809	r. p. o., 23 by 9, f. f., s. l	12	100 00		141
95,672	90,111	185,783	80,854	2,684	15 by 7, f. f., d. l., 69 m., s. l., res. 18 m.	16½*	100 00	Main route; branch $100, (189.)	142
91,859	32,533	124,392	74,327	2,477	13 by 9, f. f., s. l	6	100 00		143
.....	.....	.....	72,718	2,423	25 by 9.3, f. f., s. l	15*	100 00	Part; residue $180.81, (47.)	144
57,277	15,620	72,897	67,139	2,237	13.7 by 7.10, f. f., s. l	13	100 00		145
56,090	37,246	93,336	66,472	2,215	12.6 by 9, f. f. & m. c., s. l. to Yarmouth Junction, 41.24 m.; no r. s. residue.	12	100 00		146
41,308	31,858	73,166	66,394	2,213	17 by 7, 12 by 6.8, f. f., d. l	18	100 00		147
94,593	76,417	171,010	106,422	1,773	23 by 8, f. f., s. l	10½*	100 00	48 miles at $125; weight for 60 days, in October, 1873, and February, 1874.	148
.....	.....	.....	102,753	1,712	.....do	7½*	100 00	Part; residue $125, (111;) 60 days, in Oct., 1873, and Feb., 1874.	149
41,512	31,036	72,548	47,051	1,568	17 by 6.8, f. f., s. l	13½*	100 00		150
81,081	120,685	201,766	46,871	1,562	r. p. o., 28.1 by 9.6, f. f., s. l	12	100 00		151
.....	.....	.....	45,567	1,518	11.5 by 5.8, f. f., s. l	18	100 00	Part; residue $75, (229)	152
.....	.....	.....	43,233	1,440	14.6 by 8.6, f. f., s. l	6	100 00		153
21,015	23,126	44,141	42,341	1,411	14 by 9.3, f. f., s. l	6	100 00	Formerly in New York section.	154
.....	.....	.....	40,569	1,352	14.10 by 7.6, f. f., s. l	12	100 00	Part, residue $75, (260)	155
98,377	68,206	166,583	37,233	1,241	8.10 by 5.7, f. f., d. l. 64.9 m., s. l. 157.2 m., t. l. 65½ m., r. p. o. 39.8 m.	18*	100 00	39.8 miles at $150, (81)	156
27,075	11,200	38,275	37,163	1,238	22 by 8.4, f. f., s. l	7	100 00	Branch; main route $225, (27.)	157
37,916	27,648	65,564	36,191	1,206	10.10 by 6 5, 10.8 by 6.5, f. f., s. l.	12	100 00		158
52,282	50,201	102,483	36,170	1,205	r. p. o., 32 by 10, f. f. c. and m. c., s. l. 111.4 m.; r. s. apt., 24 by 10, f. f. c., s. l. residue, 40.6 m.	12	100 00	In May, 1874	159
33,595	22,020	55,615	35,892	1,196	10.6 by 6.6, f. f., s. l	45½*	100 00	Main route; branch $75, (280.)	160
.....	.....	.....	29,643	1,188	8.10 by 5 7, f. f., d. l. 25.1 miles, s. l., 157.2 m., t. l. 65½ miles.	17*	100 00	Part; residue $150, (81)	161
26,842	19,853	46,695	35,151	1,172	12.6 by 9, f. f., d. l	12	100 00		162
52,038	57,126	119,164	34,682	1,156	19.1½ by 9.2, f. f., s. l	12	100 00		163
82,443	25,717	58,160	34,292	1,142	12.4 by 6.6, f. f., s. l	18	100 00		164
53,753	29,395	83,148	34,079	1,135	18 by 9, fixtures, s. l	15*	100 00		165
68,871	49,418	118,289	33,011	1,100	22 by 8.6, f. f., 24 l. 29½ m., d. l. 55 m., s. l., res.	10*	100 00		166
12,928	21,726	64,654	32,620	1,087	19.6 by 9, 14 by 8.10, s. l	13	100 00	Main route; branches $50, (374, 613.)	167
.....	.....	.....	32,133	1,071	12.6 by 7.1, f. f., s. l	6	100 00	Part; residue $75, (276)	168
7,794	15,503	43,297	29,493	984	20 by 7.6, f. f., s. l	14½*	100 00		169

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
170	Ky ...	9606	20002	Covington, Nicholasville....	Kentucky Central.....	112	25
171	N. Y..	1013	1245	Albany, Binghamton.....	Delaware and Hudson Canal Company.	142	22
172	Ark ..	7501	.....	Memphis, Argenta.....	Memphis and Little Rock.....	134	15
173	Ohio ..	9006	.....	Cleveland, Leavittsburgh...	Atlantic and Great Western. ...	49.7	22
174	N. Y..	1006	1233	New York, Greenport.....	Long Island	100½	22
175	Ky ...	9607	20003	La Grange, Lexington	Louisville, Cincinnati and Lexington.	67	20
176	Vt....	508	408	Saint Albans, Canada Line..	Central Vermont, (late Vermont and Canada.)	17	25½
177	Va....	4406	.....	Richmond, Hinton.....	Chesapeake and Ohio	272	5
178	N. J ..	2111	.....	Glassborough, Millville.....	West Jersey	22	25
179	Mich .	12508	24007	Detroit, Port Huron	Grand Trunk	64½	25
180	Ohio .	9006	.....	Cleveland, Sharon	Atlantic and Great Western.....	81.3	22
181	Cal ...	14702	46002	San Francisco, Salina.....	Southern Pacific.....	118	7
182	Conn .	955	911	Waterbury, Providence.....	Hartford, Providence and Fishkill	122½	22
183	Kans .	14143	33007	Atchison, Sargent.....	Atchison, Topeka and Santa Fé..	470½	9
184	Wis ..	13013	25010	Caledonia, Elroy	Chicago and Northwestern.....	125.45	24
185	Kans	14143	33007	Newton, Wichita	Atchison, Topeka and Santa Fé..	26	10
186	Mass	654	634	South Braintree Junction, Newport.	Old Colony and Newport.....	61.75	25
187	Me ...	84	4	Calais, Princeton.....	Saint Croix and Penobscot	21	9
188	Ohio ..	9031	.....	Xenia, Springfield.....	Little Miami.....	19	22
189	Mass	690	646	Greenfield, Turner's Falls...	Vermont and Massachusetts	5	21
190	Cal ...	14702	46002	Gilroy, Hollister.....	Southern Pacific.....	14	20
191	Pa....	2406	.....	Philadelphia, Darby	Philadelphia and Darby.....	5	
192	Ind ...	12017	22017	Indianapolis, Peoria	Indianapolis, Bloomington and Western.	212.2	29
193	N. Y..	1022	1242	Rouse's Point, Ogdensburgh	Central Vermont, (late Ogdensburgh and Lake Champlain)	119	22
194	Tenn	10068	19008	Nashville, Guthrie.....	Saint Louis and Southeastern. Consolidated, (late Edgefield and Kentucky.)	48	25
195	Ill	11900	23032	East Saint Louis, Evansville	Saint Louis and Southwestern. Consolidated, (late Saint Louis and Southeastern.)	164½	25
196	Mass .	607	607	Boston, Southbridge	Boston, Hartford and Erie	70	25
197	N. Y..	1028	1257	Syracuse, Binghamton.....	Syracuse, Binghamton and New York.	80	25
198	Ill ...	11429	23005	Sterling, Alton Junction....	Rockford, Rock Island and Saint Louis.	270	25
199	N. Y..	1040	1230	Owego, Ithaca	Delaware, Lackawanna and Western.	35	20
200	N. Y..	1005	1260	Stapleton, Tottenville	Staten Island	21	22
201	Conn .	945	910	South Norwalk, Danbury...	Danbury and Norwalk	23½	25
202	Pa....	2442	.....	Pittsburgh, Oil City	Allegheny Valley.....	132.71	22
203	Ind ...	12012	22012	Evansville, Terre Haute....	Evansville and Crawfordsville...	110	24
204	Ohio ..	9012	.....	Xenia, Dayton.....	Pittsburgh, Cincinnati and Saint Louis.	17	25
205	Kans .	14001	33001	Leavenworth, Lawrence....	Kansas Pacific.....	31	25
206	Me ...	204	13	Bath, Rockland.....	Knox and Lincoln	49	25
207	Mass .	678	642	Taunton, New Bedford.....	New Bedford, (late New Bedford and Taunton.)	20½	7
208	Conn ..	942	908	Bridgeport, Winsted	Naugatuck	62	25
209	Mich ..	12950	24031	Fort Howard, Esconawba...	Chicago and Northwestern	114.6	25
210	Pa	2425	.....	Oil City, Corry	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	44.5	25
211	N. J ..	2254	.....	New York, Middletown.....	New Jersey Midland	86	25
212	N. C ..	5004	.....	Charlotte, Goldsborough....	Richmond and Danville.....	223	25
213	N. C ..	5004	.....	Greensborough, Goldsborough.	.....do	130	25

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Remarks.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
30,007	20,884	50,891	29,535	984	12 by 8, f. f., d. l. 99 m., s. l res.	11½*	$100 00	.....	170
42,563	28,263	70,826	28,135	937	15 by 8, fixtures and m. c., s. l.	18	100 00	.....	171
24,203	9,241	33,444	27,938	931	10.4 by 8.2, 9.4 by 6.4, f. f., s. l	6	100 00	.....	172
.....	.....	.....	27,780	926	12.6 by 8, f. f., s. l	15*	100 00	Part; residue $60,(330).	173
37,310	20,724	58,034	25,579	852	10 by 8, 10.4 by 8.3, f. f., s. l	9*	100 00	.....	174
20,757	18,490	39,247	25,510	850	10 by 7.3, f. f., s. l.....	12	100 00	.....	175
17,352	7,102	24,454	24,454	815	17 by 9.3, f. f., s. l.....	6	100 00	.....	176
45,313	25,359	70,672	24,311	810	20.7 by 6.10, f. f., s. l.....	12	100 00	.....	177
15,142	11,513	26,655	22,555	751	8 by 6.4, f. f., s. l.....	12	100 00	Speed 22 miles per hour in winter.	178
18,526	6,992	25,518	19,990	666	22 by 7.2, f. f. c., s. l.....	12	100 00	.....	179
20,482	14,074	40,556	19,130	637	12.6 by 8, f. f., s. l	12½*	100 00	31.61 miles at $60.....	180
24,172	11,643	35,815	18,407	613	11 by 9, 11.6 by 9, f. f., s. l...	7	100 00	Main route; branch $100, (190.)	181
42,598	37,463	80,061	18,366	612	14.2 by 6.6, f. f., s. l	22½*	100 00	.....	182
41,178	24,747	65,925	17,056	568	14 by 9, 10 by 7, 11 by 7, f. f., s. l.	6	100 00	119 miles at $50; main route; branch $100, (185.)	183
22,076	13,416	35,492	17,057	568	42.6 by 10, f. f. c., s. l.....	6	100 00	.....	184
9,682	6,813	16,495	12,994	432	14 by 9, 11 by 7, 10 by 7, f. f., s. l.	6	100 00	Branch; main route $100 and $50, (183.)	185
16,354	12,285	28,639	8,160	272	b. c; no r. a.....	12	100 00	.....	186
2,041	2,976	5,017	4,522	150	10 by 7, f. f; no r. a.....	6	100 00	.....	187
.....	.....	.....	3,120	104	15.6 by 8.6, f. f., s. l.....	24	100 00	Part; residue $225,(30).	188
1,451	1,158	2,609	2,428	81	No r. a	12	100 00	Branch; main route $100, (142.)	189
1,469	663	2,132	2,132	71	No r. a	7	100 00	Branch; main route $100, (181.)	190
603	282	885	885	29	.....	.....	100 00	Street railway.....	191
51,943	41,126	93,069	53,127	1,770	r. p. o., (say) 50 by 10, f. f. c. and m. c., s. l.	12	90 00	Railway post-office, with platforms, 56 by 10.	192
40,942	33,958	74,900	48,723	1,624	13.8 by 7.3, f. f., s. l.....	9	90 00	.....	193
18,028	26,180	44,208	38,762	1,292	12 by 6.6, f. f., s. l.....	6	90 00	Trips 6 at weighing, usually 12.	194
45,668	26,156	71,824	36,352	1,211	.....do	12	90 00	Main route; branch $40, (656.)	195
26,723	22,587	49,310	29,089	969	12.10 by 6.10, 12.7 by 6.10, f. f., d. l.	12	90 00	.....	196
23,626	17,370	40,996	20,423	680	20 by 7.6, f. f., s. l.....	12	90 00	.....	197
31,234	33,070	64,304	18,110	604	10.11 by 9.4, f. f., s. l.....	10¾*	90 00	.....	198
13,997	7,395	21,382	18,036	601	8 by 7.8, f. f., s. l	12	85 71	.....	199
4,973	2,182	5,155	5,155	171	No apt; no r. a.....	12	85 71	.....	200
31,911	17,732	39,643	30,206	1,007	10 by 6, f. f., d. l.....	24½*	85 71	Main route; branches $50, (489,) $30, (709.)	201
30,583	30,092	70,681	32,676	1,089	14.8 by 8.8, f. f., s. l.....	18	85 00	.....	202
30,268	30,735	50,003	29,061	968	12.6 by 8, f. f., s. l	12	85 00	.....	203
12,079	15,252	27,331	26,536	884	15.6 by 8.6, f. f., s. l	24	85 00	.....	204
23,908	11,896	27,802	24,811	827	44.3 by 10.6, f. f., s. l	13	85 00	Branch; main route $150, (77.)	205
24,137	13,227	34,364	24,318	810	14.6 by 7.2, 13 by 6.8, f. f., d. l	12	85 00	.....	206
14,112	12,081	26,193	23,417	801	Locked room in b. c.; no r. a.	27*	85 00	.....	207
31,3[illegible]	16,358	45,671	22,891	762	10.6 by 6.6, f. f., s. l.....	12	85 00	Main route; branch $75, (283.)	208
30,679	16,9[illegible]2	47,861	22,552	751	18 by 10, f. f., s. l	6	85 00	.....	209
.....	.....	.....	16,301	543	8 by 7, f. f., s. l	12	85 00	Part; residue $55,(349.)	210
31[illegible]	12,147	30,458	19,774	659	18 by 7, f. f., s. l.....	6	83 00	.....	211
59[illegible]	50,669	71,266	27,804	926	21 by 8, f. f., s. l.....	9½*	82 11	93 miles at $125	212
.....	.....	.....	15,081	502	.....do.....	7	82 11	Part; residue $125,(114.)	213

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
214	Ohio..	9038	.....	Salamanca, Dayton.....	Atlantic and Great Western.....	399.55	26
215	Conn .	943	909	Bridgeport, Pittsfield	Housatonic	110	12
216	Mich .	12521	24021	New Buffalo, Pentwater	Chicago and Michigan Lake Shore.	165.5	20
217	Pa....	2419	.....	Binghamton, New Hampton.	Delaware, Lackawanna and Western.	144.50	25
218	Tex...	8506	.....	Dallas, Shreveport.....	Texas and Pacific.....	189.2	12
219	Iowa .	11002	27011	Keokuk, Burlington	Chicago, Burlington and Quincy .	42.75	21
220	Ill....	11410	23052	Cortland, Sycamore.....	Sycamore and Cortland	5	10
221	Conn .	943	909	Van Deusenville, State Line.	Housatonic	11	12
222	Conn .	943	909	Danbury, Brookfield Junct'n.	.....do	5½	12
223	Ohio..	12501½	9049	Toledo, Elkhart	Lake Shore and Michigan Southern.	133.60	28
224	Conn .	938	906	New Haven, Williamsburgh.	New Haven and Northampton ...	83	9
225	Cal'...	14703	46003	Roseville Junction, Tehama.	California and Oregon	105	20
226	Mass .	696	647	Palmer, Miller's Falls.....	Central Vermont, (late New London Northern)	35	....
227	Mich .	12515	24015	Bay City, Monroe.....	Flint and Pere Marquette.....	132	21
228	Conn .	926	902	New London, Palmer	Central Vermont, (late Vermont Central.)	65	12
229	Conn .	926	902	Willimantic, Palmer.....	.....do	35	12
230	Ky ...	9612a	20010	Evansville, Guthrie.....	Saint Louis and Southeastern, Consolidated, (late Saint Louis and Southeastern.)	110.68	22
231	R. I..	801	801	Providence, Worcester.....	Providence and Worcester.....	44	20
232	N. Y..	1037	1216	Buffalo, Lewiston	New York Central and Hudson River.	99	30
233	N. Y..	1029	1256	Syracuse, Oswego.....	Oswego and Syracuse	35½	25
234	Pa....	2417	.....	Scranton, Northumberland..	Lackawanna and Bloomsburgh ..	60	15
235	Me ...	1	1	Augusta, Skowhegan.....	Maine Central, (late Portland and Kennebeck.)	39	20
236	Ala...	6604	.....	Montgomery, Decatur	South and North Alabama	183.3	20
237	Wis ..	13006	25003	Milwaukee, Berlin	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	84.80	28
238	Ill	11412	23016	Bureau Junction, Peoria....	Chicago, Rock Island and Pacific	47	22
239	Tenn .	10006	19006	Nashville, Decatur.....	Nashville and Decatur	122½	25
240	Ohio..	9040	.....	Columbus, Athens	Columbus and Hocking Valley...	77.40	22
241	Conn	925	901	Norwich, Worcester	Boston, Hartford and Erie	60	15
242	Mich .	12846	24029	Escanawba, Negaunee	Chicago and Northwestern.....	62.32	30
243	Iowa .	11011	27029	Missouri Valley, Sioux City.	Sioux City and Pacific	76	25
244	Me ...	19	34	Farmington, Brunswick	Androscoggin.....	71½	20
245	Mass .	688	644	Sterling Junction, Fitchburgh.	Boston, Clinton and Fitchburgh..	14	20
246	Iowa	11001	27019	Keokuk, Des Moines	Keokuk and Des Moines.....	162	22
247	Mass .	640	631	South Framingham, Pratt's Junction.	Boston, Clinton, and Fitchburgh	29	20
248	N. Y..	1032	1205	Rochester, Avon.....	Erie	12	20
249	N. Y..	1016	1212	Troy, Schenectady.....	New York Central and Hudson River.	21	30
250	Pa....	2408	.....	Chester, Port Deposit.....	Philadelphia and Baltimore Central.	35½	20
251	N. J ..	2116	.....	Trenton, Intersection with Delaware, Lackawanna and Western Railroad.	Pennsylvania	68.30	20
252	Ind ...	12004	22004	Kokomo, Peru.....	Indianapolis, Peru and Chicago ..	24	20
253	Tenn .	10007	19007	Nashville, Hickman	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga.)	170	25
254	Miss..	7003	.....	Vicksburgh, Meridian	Vicksburgh and Meridian.....	140.30	16

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
61,385	65,529	128,914	24,835	827	12.6 by 8, f. f., s. l.	16*	$80 00	61.55 miles at $110	214
33,460	20,566	54,026	22,047	734	11.6 by 6, f. f., s. l. 79 m., d. l. 31 m.	13½*	80 00	Main route; branches $80, (221, 222.) In March, 1874.	215
70,303	38,212	108,515	43,596	727	12 by 10, f. f., s. l.	14½*	80 00	Main route; branch $50, (488;) 60 days, in September, 1873, and January, 1874.	216
21,092	36,541	57,633	20,554	685	19 by 7, f. f., s. l.	9½*	80 00		217
18,348	19,460	37,808	19,023	634	14.4 by 8, f. f., s. l.	6	80 00		218
7,764	13,644	21,408	17,601	585	15 by 7.6, f. f., s. l.	12	80 00		219
2,233	1,497	3,730	3,730	123	No r. a	18	80 00		220
3,294	689	3,983	3,393	113	No apt.; no r. a.	6	80 00	Branch; main route $80, (215.) In March, 1874.	221
320	598	918	918	30	do	6	80 00	Branch; main route $80, (215.) In March, 1874.	222
744,840	145,554	890,394	858,872	28,629	r. p. o., 51.6 by 10.9, f. f. c. and m. c., d. l.	26	75 00	Transferred from Michigan section.	223
49,558	43,280	92,838	64,095	2,136	12 by 10, f. f., d. l.	12	75 00	Main route; branch $75, (282.)	224
45,937	14,123	60,060	45,362	1,512	12.9 by 8.10, f. f. c., s. l.	7	75 00		225
24,406	24,686	49,092	44,707	1,490	11.5 by 5.8, f. f., s. l.	6	75 00		226
27,900	122,404	150,304	41,983	1,399	21 by 8.10½, f. f., s. l.	14½*	75 00		227
38,718	32,638	71,356	41,423	1,380	11.5 by 5.8, f. f., s. l.	18	75 00	30 miles at $100	228
			37,869	1,261	do	18	75 00	Part; residue $100, (152.)	229
24,516	35,976	60,492	35,578	1,186	12 by 6.6, f. f., s. l.	6	75 00	Company state mail usually carried 12 times a week.	230
31,161	30,665	61,826	31,322	1,044	14.10 by 6.1, 13.6 by 6.2, f. f. c., d. l.	18	75 00		231
21,298	20,344	41,641	29,583	986	b. c.	6	75 00		232
19,456	11,296	30,752	22,783	867	11 by 6, fixtures, d. l.	18	75 00		233
24,165	26,407	50,572	25,725	857	11 by 6.8, f. f., s. l.	7½*	75 00		234
17,020	31,612	48,632	25,239	841	r. p. o., 42 by 9, d. l. to Fairfield, 22 m.; r. a. apt., 16 by —, s. l.	13*	75 00		235
24,726	31,171	55,897	23,993	799	14.10 by 7.6, f. f., s. l.	8*	75 00	63 8 miles at $100	236
32,248	16,753	49,001	23,703	790	22.6 by 10.3, f. f., s. l.	12	75 00		237
18,558	9,657	28,215	23,581	785	14 by 10, f. f., s. l.	12	75 00		238
22,539	14,297	36,836	22,993	766	15 by 7.8, f. f., s. l.	12	75 00		239
21,372	14,024	35,396	22,660	755	14 by 10, f. f., s. l.	12	75 00	Main route; branch $40, (675.)	240
21,395	20,187	41,582	21,317	710	12 by 7, f. f., s. l.	15*	75 00		241
13,804	7,517	21,321	21,321	710	18 by 10, f. f., s. l.	12	75 00		242
18,537	8,499	27,036	21,133	704	20 by —, f. f., s. l.	12	75 00	Part; residue $50, (471.) In May, 1874.	243
15,340	20,318	35,658	21,104	703	12 by —, fixtures, s. l.	6	75 00		244
16,678	13,404	30,082	20,755	691	12 by 6.6, f. f., d. l. beyond Pratt's Junction; no r. a. residue, 5 m.	25½*	75 00		245
26,455	24,031	50,486	20,080	684	16.6 by 9, f. f., s. l.	12	75 00	Part. No returns from residue.	246
15,814	13,033	28,847	20,015	667	12 by 6.6, f. f., d. l.	12	75 00		247
12,689	8,189	20,878	19,398	646	b. c.; no r. a	12	75 00		248
12,026	8,586	20,612	19,237	641	b. c.	18	75 00		249
21,542	18,401	39,943	19,197	639	½ car, d. l.	12	75 00	In August, 1874	250
23,443	16,014	39,457	18,506	617	9.6 by 6, f. f., s. l.	20½*	75 00		251
			18,398	613	12 by 8, f. f., s. l.	18	75 00	Part; residue $150, (94.)	252
9,156	13,364	22,520	17,305	577	12 by 9, f. f., s. l.	12½*	75 00		253
14,471	32,290	46,761	16,646	554	12.6 by 7.1, f. f., s. l.	6	75 00	45½ miles at $100	254

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
255	Ill	11433	23033	Beardstown, Shawneetown..	Springfield and Illinois Southeastern.	229.70	21
256	Ga....	6010	.....	Macon, Columbus.....	Southwestern	100	22
257	Pa....	2416	.....	Hazle Creek Bridge, Tomhicken.	Lehigh Valley	25.2	20
258	Mo ...	10507	28007	Moberly, Ottumwa.....	Saint Louis, Kansas City and Northern, (late North Missouri.)	131	22
259	N. C ..	5001	.....	Raleigh, Weldon.....	Raleigh and Gaston.....	97	20
260	Ala...	6604	.....	Calera, Decatur.....	South and North Alabama.....	119.5	20
261	Mich .	12503	24002	Monroe, Adrian.....	Lake Shore & Michigan Southern	35	22
262	N. J ..	2109	.....	Philadelphia, Pemberton Junction.	Pennsylvania	25	30
263	Ohio ..	9033	.....	Morrow, Dresden	Cincinnati & Muskingum Valley	149.4	22½
264	Ga....	6015	.....	Fort Valley, Eufaula.....	Southwestern.....	115½	20
265	S. C...	5605	.....	Branchville, Charleston.....	South Carolina.....	62	18
266	Minn .	13507	26002	Saint Paul, Sauk Rapids....	Saint Paul and Pacific	78	18
267	N. J ..	2112	.....	Millville, Cape May.....	West Jersey..... ...	41	20
268	Penn .	2427	.....	Lancaster, Middletown	Pennsylvania	31.2	23
269	Mich .	12517	24017	Detroit, Howard City.....	Detroit, Lansing & Lake Michigan	164	20
270	Ala...	6607	.....	Opelika, Columbus.....	Western, of Alabama	26	15
271	Pa....	2444	.....	Meadville, Oil City	Atlantic and Great Western.....	36.25	25
272	Ohio ..	9022	.....	Clayton, Keokuk	Toledo, Wabash and Western....	44	22
273	Pa	2409	.....	Honesdale, Lackawaxen	Erie	25	20
274	Md ...	3507	.....	Lake Roland, Hagerstown ..	Western Maryland.....	85½	20
275	Pa....	2408	.....	Chester, Port Deposit.....	Philadelphia and Baltimore Central.	59½	20
276	Miss ..	7003	.....	Jackson, Meridian.....	Vicksburgh and Meridian	95.2	16
277	Conn .	932	903	Middletown, Berlin	New York, New Haven and Hartford.	10	20
278	N. Y ..	1021	1243	Plattsburgh, Canada Line...	Montreal and Plattsburgh	23	22
279	Wis ..	13009	25006	Horicon, Portage	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	45.25	30
280	Pa....	2404	.....	Landsdale, Doylestown	North Pennsylvania	9.6	30
281	Fla ...	6402	.....	Lake City, Quincy.....	Jacksonville, Pensacola & Mobile	131.25	15
282	Conn .	938	906	Farmington, New Hartford	New Haven and Northampton...	16	20
283	Conn .	942	908	Waterbury, Watertown.....	Naugatuck	5¼	12
284	Cal ...	14707	46007	Davisville, Knight's Landing	California Pacific	18.2	20
285	Miss ..	7006	.....	Grand Gulf, Port Gibson....	Grand Gulf and Port Gibson.....	8	
286	Cal ...	14728	46013	Wilmington, Los Angeles...	Los Angeles and San Pedro.....	22	20
287	Ga....	6017	.....	Atlanta, Charlotte	Atlanta and Richmond Air-Line	259.1	22
288	N. Y..	1561	1273	Fonda, Gloversville.....	Fonda, Johnstown & Gloversville	10	20
289	Mich .	12529a	24013	Detroit, Bay City.....	Detroit and Bay City	111.13	25
290	Wis ..	13020	25018	Milwaukee, Two Rivers	Milwaukee, Lake Shore and Western.	85	20
291	N. J ..	2115	.....	Jamesburgh, Freehold	Freehold and Jamesburgh Agricultural.	11.45	20
292	Ill	11415	23009	Peoria, Galesburgh	Chicago, Burlington and Quincy	54	21
293	Ill	11415	23009	Peoria, Galesburgh	.....do	54	20
294	Ohio ..	9034	.....	Dayton, Richmond.....	Pittsburgh, Cincinnati and Saint Louis.	42	20
295	N. Y {	1025	1283	Utica, Watertown	Utica and Black River.....	92.22	20
	{	1181	}				
296	Pa....	2414	.....	Port Clinton, Williamsport	Philadelphia and Reading.....	121.55	22

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
25, 641	24, 310	49, 951	16, 565	552	11 by 7, f. f., s. l.	6	$75 00		255
10, 048	8, 184	18, 232	15, 630	521	11 by 6.9, f. f., s. l.	10*	75 00		256
14, 212	7, 738	21, 950	15, 531	517	10 by 7, f. f., d. l. 13.8 m., s. l. residue.	13*	75 00		257
25, 108	13, 090	38, 198	15, 477	515	22 by 7.6, f. f., s. l.	12	75 00		258
9, 307	12, 997	22, 304	15, 433	514	11 by 6, f. f., s. l.	6	75 00		259
.....	.....	.....	15, 433	514	14.10 by 7.6, f. f., s. l.	6	75 00	Part; residue $100, (155.)	260
7, 753	9, 022	16, 780	14, 886	496	11.10 by 7.1, f. f., s. l.	6	75 00		261
.....	.....	.....	14, 857	495	8 by 6.6, fixtures, s. l.	12	75 00	Part; residue $50, (429.)	262
21, 631	21, 323	42, 954	14, 038	467	13.6 by 7, s. l.	12½*	75 00		263
16, 306	9, 751	26, 057	12, 984	432	14 by 8.9, f. f., s. l.	11	75 00	Main route; branches $50, (499,) and $40, (671.)	264
8, 444	5, 893	14, 337	12, 648	421	16.2 by 8.2, f. f., d. l.	13	75 00	Branch; main route $125, (123.)	265
13, 492	5, 601	19, 093	12, 440	414	12.6 by 9, f. f., s. l.	11½*	75 00		266
8, 566	6, 294	14, 860	11, 398	379	8 by 6.4, f. f., s. l.	12	75 00	Speed 22 miles per hour in winter.	267
14, 237	5, 590	19, 827	12, 112	404	10.10 by 8, f. f., s. l.	15*	75 00		268
23, 207	9, 491	32, 698	11, 279	375	10 by 9, f. f., s. l.	6	75 00		269
6, 275	5, 604	11, 879	10, 814	360	18.4 by 8.8, f. f., s. l.	7	75 00		270
10, 083	7, 423	17, 506	10, 410	347	12.6 by 8, f. f., s. l.	9*	75 00		271
7, 322	7, 227	14, 549	10, 399	346	12 by —, f. f., s. l.	12	75 00	Branch; main route $225, (23.)	272
4, 405	7, 599	12, 004	10, 287	343	b. c.; no r. a.	12	75 00		273
15, 760	9, 677	25, 437	9, 644	321	10 by 9, f. f., d. l.	12	75 00		274
14, 325	11, 080	25, 405	11, 123	320	½ car, d. l.	12	75 00	In October, 1873.	275
.....	.....	.....	9, 310	310	12.6 by 7.1, f. f., s. l.	6	75 00	Part; residue $100, (168.)	276
3, 189	4, 397	7, 586	6, 797	226	In b. c.; no r. a.	18	75 00	In June, 1874.	277
3, 327	5, 048	8, 375	6, 249	208	No apt.; no r. a.	12	75 00		278
7, 166	5, 109	12, 275	5, 841	194	23 by 10, f. f., s. l.	6	75 00		279
2, 655	4, 910	7, 565	5, 793	193	10.6 by 6.6, f. f., s. l.	18	75 00	Branch; main route $100, (160.)	280
9, 408	11, 714	21, 122	5, 594	186	12.4 by 6.9, f. f., s. l.	7	75 00	Main route, part; residue $75; branch $30, (722.)	281
4, 780	3, 120	7, 900	3, 907	130	12 by 10, f. f., d. l.	12	75 00	Branch; main route $75, (224.)	282
2, 244	1, 133	3, 377	2, 987	99	No r. a.	6	75 00	Branch; main route $85, (208.)	283
3, 023	1, 268	4, 291	2, 775	92	11.8 by 8.10, f. f.; no r. a.	7	75 00	Branch; main route $150, (99.)	284
1, 283	521	1, 804	1, 804	60	No r. a.	6	75 00		285
426	854	1, 340	1, 043	35	No apt.	6	75 00	In May, 1874.	286
11, 942	12, 459	24, 401	14, 271	475	22.6 by 10, f. f., s. l.	7	70 00		287
8, 664	5, 214	13, 878	11, 126	370	No r. a.	12	70 00		288
14, 679	7, 503	22, 382	12, 679	422	14 by 7.6, f. f., s. l.	12	68 00		289
12, 075	7, 306	19, 381	12, 358	411	12 by —, f. f., s. l.	12	67 00	Main route; branch $40, (672.) In June, 1874.	290
3, 727	2, 314	6, 041	5, 420	180	No apt.; no r. a.	12	66 37		291
38, 389	28, 177	66, 566	47, 574	1, 585	r. p. o., (say) 50 by 9, 50 by 9, 36 by 9, (average 45 4 by 9,) f. f. c., s. l.	12	65 00	r. p. o., with platforms, 55.6 by 9, 55.6 by 9, 41 by 9. In Nov., 1873.	292
28, 609	19, 784	48, 393	31, 610	1, 053	r. p. o., (say) 50 by 9, 50 by 9, 36 by 9, (average 45.4 by 9,) f. f. c., s. l.	12	65 00	r. p. o., with platforms, 55.6 by 9, 55.6 by 9, 41 by 9. In Oct., 1873.	293
9, 237	6, 056	15, 293	11, 644	394	15.6 by 8.6, f. f., s. l.	12	65 00		294
19, 181	13, 193	32, 374	11, 067	368	13 by 9, f. f., s. l.	12	65 00		295
14, 884	15, 995	30, 879	9, 643	321	10.1 by 6.10, 7.8 by 6.8, f. f., s. l.	7*	65 00		296

E.—*Table showing the weight of mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
297	N. Y..	1046	1251	Skaneateles Junction, Skaneateles.	Skaneateles	54	18
298	Del...	3402	.....	Delmar, Crisfield	Eastern Shore	38	20
299	N. Y..	1525	1278	Cooperstown, Cooperstown Junction.	Cooperstown and Susquehanna Valley.	16	20
300	Mass.	739	654	East Salisbury, Amesbury..	Eastern	4	20
301	N. J..	2113	.....	Elmer, Salem	West Jersey	16.69	20
302	N. Y..	1524	1279	Chatham Village, Rutland..	Central Vermont, (late Harlem Extension.)	111.3	19
303	Pa....	2412	.....	Penn Haven Junction, Audenreid.	Lehigh Valley	17.5	20
304	Wis..	13018	25017	Menasha, Stevens' Point....	Wisconsin Central, operated by Phillips & Colby Construction Company.	65.27	20
305	Mich.	12512	24011	Kalamazoo, Grand Rapids..	Lake Shore & Michigan Southern	58½	21
306	Pa....	2440	.....	Blairsville, Allegheny	Pennsylvania	63.7	17
307	Ill....	11411	23027	State Line, Warsaw	Toledo, Peoria and Warsaw	227.75	20
308	Pa....	2476	.....	Tyrone, Clearfield	Pennsylvania	40.6	15
309	Iowa.	11004	27017	Wilton, Leavenworth	Chicago, Rock Island and Pacific	322.77	21
310	Pa....	2439	.....	Tyrone, Lookhaven	Pennsylvania	55.1	20
311	Pa....	2456	.....	Pittsburgh, Washington....	Pittsburgh, Cincinnati and Saint Louis.	22.8	18
312	Kans.	14212	33009	Atchison, Lincoln	Atchison and Nebraska	152.38	21
313	Kans.	14314	33012	Junction City, Clay Centre	Junction and Fort Kearney	33.85	15
314	Wash	.....	43001	Kalama, Tacoma	Northern Pacific	106.6	1
315	Mass.	721	650	Pittsfield, North Adams....	Boston and Albany	21	25
316	Kans.	14311	33011	Lawrence, Carbondale	Lawrence and Southwestern	32.9	15
317	Ohio..	9047	.....	Mansfield, Toledo	Pennsylvania Company	86.1	23
318	Pa....	2435	.....	Huntington, Mount Dallas..	Huntington and Broad Top	50	20
319	Minn.	13301	26016	La Crosse, Winnebago City	Southern Minnesota	170.50	17
320	Kans.	14006	33006	Parsons, Junction City.....	Missouri, Kansas and Texas	156¼	19
321	Mass.	606	606	Boston, Woonsocket Falls...	Boston, Hartford and Erie	33.68	20
322	S. C...	5605	.....	Kingsville, Columbia	South Carolina	97	18
323	Ohio..	9026	.....	Dayton, Union City	Dayton and Union	48.17	21
324	Pa....	2434	.....	Hanover, Gettysburgh.....	Susquehanna, Gettysburgh and Potomac.	17.5	20
325	Wis..	13018	25017	Menasha, Colby	Wisconsin Central, operated by Phillips & Colby Construction Company.	114.20	20
326	N. Y..	1524	1279	North Bennington, State Line	Central Vermont, (late Harlem Extension.)	2	19
327	Pa....	2439	.....	Milesburgh, Bellefonte.....	Pennsylvania	2.7	20
328	Va....	4405	.....	Manassas, Strasburgh Junction.	Washington City, Virginia Midland and Great Southern, (late Orange, Alexandria & Manassas.)	111	22
329	Me ...	9a	3	Newport, Dexter	Maine Central	14	20
330	Ohio..	9006	.....	Leavittsburgh, Sharon.....	Atlantic and Great Western	31.61	25
331	Iowa.	11006	27020	Farley, Cedar Rapids	Dubuque and Southwestern	55.37	17½
332	Wis..	13012	25019	Sheboygan, Princeton.....	Sheboygan and Fond du Lac	79.05	20
333	Conn.	607	975	Putnam, Willimantic	Boston, Hartford and Erie	24.68	20
334	Pa....	2475	.....	Mount Dallas, Cumberland.	Pennsylvania	47.6	20
335	N. Y..	1033	1206	Avon, Dansville	Erie	31.73	20
336	N. H..	255	254	Concord, Claremont Junction	Concord and Claremont	54.99	21
337	N. H..	278	257	Nashua, Wilton	Boston and Lowell and Nashua and Lowell.	16	25
338	Me ...	117	7	Portland, Rochester	Portland and Rochester	53	20
339	R. I...	803	803	Providence, Bristol	Providence, Warren and Bristol	14.6	17
340	Ohio..	9005	.....	Hudson, Columbus	Cleveland, Mount Vernon and Delaware.	144.38	25
341	Ohio..	9022	.....	Bluff City, Naples	Toledo, Wabash and Western	4	16
342	Iowa.	11012	27001	Burlington, Plymouth	Burlington, Cedar Rapids and Minnesota.	22.8	20
343	Pa....	2425	.....	Irvine, Corry	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	95	20
344	Iowa.	11016	27012	Clinton, La Crescent Junction	Chicago, Dubuque & Minnesota	178.57	20
345	Ohio..	9035	.....	Valley Junction, Hagerstown	White Water Valley	70.45	19

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
3,112	2,039	5,121	3,106	104	18 by 8, fixtures; no r. a	12	$63 63		297
11,546	7,474	19,020	12,361	412	28 by 9.4, f. f. c., a. l	6	62 50		298
5,511	6,170	11,681	8,257	275	No r. a	12	62 50		299
2,685	1,851	4,736	4,255	141	do	15	62 50		300
6,521	4,221	10,744	8,333	277	7.7 by 6.8, f. f.; no r. a	12	60 24		301
41,127	42,103	83,230	54,809	1,826	17.6 by 6.6, f. f., a. l	6	60 00	Main route; branch $60, (326.)	302
21,399	11,336	32,935	15,649	521	10 by 7, f. f., a. l. 8 miles	12*	60 00		303
12,745	6,892	19,637	13,571	451	14.2 by 7.10, f. f., a. l	6	60 00	Part; residue $40, (678.) In May, 1874.	304
13,612	6,233	19,845	12,695	423	17.3 by 9, f. f., a. l	12	60 00		305
9,297	17,245	26,542	11,367	378	10.9 by 8, f. f., a. l	9½*	60 00		306
27,282	23,117	50,399	11,082	369	23 by 8.9, f. f. c., a. l	6	60 00	Main route; branch $5), (577.)	307
9,282	5,690	14,972	11,004	366	10.9 by 8, f. f., a. l	12	60 00		308
36,327	21,663	57,990	10,634	354	18.5 by 9.5, f. f., a. l	6	60 00		309
8,149	10,932	19,081	10,562	352	10.9 by 8, f. f., a. l	12	60 00	Main route; branch $60, (327.)	310
8,935	5,079	14,014	10,541	351	8.6 by 6.11, f. f., d. l	12	60 00		311
20,032	18,752	38,784	10,381	346	12 by —, f. f., a. l	7	60 00		312
6,264	4,044	10,308	10,136	337	— by —, f. f., a. l	6	60 00		313
9,015	3,800	12,815	9,664	322	12 by 5, f. f., a. l	6	60 00	In May, 1874	314
6,609	4,954	11,563	9,572	319	No apt	18*	60 00		315
8,065	5,133	13,198	9,296	310	8.4 by 8, f. f., a. l	6	60 00	In August, 1873	316
8,779	8,275	17,054	9,069	302	9.6 by 7.6, f. f., a. l	12	60 00		317
10,849	8,056	18,905	9,047	301	7.1 by 6 6, f. f., a. l	6	60 00		318
18,547	11,167	29,714	8,997	299	12 by 8, f. f., a. l	6	60 00		319
11,881	9,020	20,901	8,992	299	18.8 by 6.8, f. f., a. l	6	60 00	In June, 1874	320
12,585	8,880	21,465	8,991	296	No r. a	15*	60 00		321
3,269	5,991	9,260	8,705	290	16.2 by 8.2, f. f., d. l	13	60 00	Branch; main route $125, (123.)	322
9,240	6,022	15,262	8,297	276	11 by 7, f. f., a. l	6	60 00	In July, 1873	323
5,356	4,692	10,048	8,295	276	8 by 6, f. f. d. l	12	60 00		324
12,745	6,892	19,637	7,302	243	14.2 by 7.10, f. f., a. l., 63 miles	6	60 00	In May, 1874. Pay fixed to Stevens' Point, 63. 27 miles.	325
1,096	6,157	7,253	7,253	241	17.6 by 6.6, f. f., a. l	6	60 00	Branch; main route $60, (302.)	326
3,020	3,942	6,962	6,962	232	10.9 by 8, f. f., a. l	12	60 00	Branch; main route $60, (310.)	327
8,501	5,237	13,738	6,499	216	11.6 by 8.9, f. f., a. l	6	60 00	Part; residue transferred to Baltimore & Ohio Railroad Co.	328
3,875	2,629	6,507	5,887	196	No r. a	12	60 00		329
.....	.....	.....	5,791	192	12.6 by 8, f. f., a. l	9½*	60 00	Part; residue $100, (173.)	330
8,182	5,547	13,729	5,703	190	14 by 11, f. f., a. l	6	60 00		331
8,675	9,969	18,644	5,369	179	10 by 7.6, f. f., a. l	6½*	60 00		332
6,366	5,001	11,367	5,109	170	12.7 by 6.10, 12.10 by 6.10, f. f., d. l.	12	60 00	Part of 607 old	333
5,074	4,101	9,175	3,208	106	9.2 by 6.11, f. f., a. l	7*	60 00		334
7,283	12,933	20,216	10,192	340	b. c.; no r. a	12	59 37		335
24,212	21,977	50,189	36,226	1,207	12 by 6.8, f. f., d. l.	12	57 69		336
8,793	5,832	14,625	11,485	383	36 cubic feet; no r. a	18	56 23		337
14,079	11,537	25,616	10,831	361	13 by 6, 12 by 7, d. l	12	55 55		338
8,246	3,291	11,537	9,395	313	No r. a	12	55 10		339
37,951	40,332	78,290	40,290	1,342	19 by 8.6, f. f., a. l	9½*	55 00	In May, 1874	340
19,466	5,402	24,862	24,862	829	12 by —, f. f., a. l	12	55 00	Branch; main route $225, (23.)	341
27,929	26,551	54,480	19,902	663	12 by 9.3½, f. f., a, l	6½*	55 00		342
24,619	21,244	45,863	12,215	407	8 by 7, f. f., a. l	12	55 00	44. 8 miles at $85	343
20,965	12,585	33,553	11,558	385	18.6 by 8.10, f. f. c., a. l	6	55 00	In April, 1874	344
11,243	8,014	19,257	11,196	372	12 by 7.4, f. f., a. l	6	55 00		345

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
346	Pa....	2443	.....	Branch Junction, Indiana...	Pennsylvania	19	16
347	Kans	14004	33004	Elwood, Hastings	Saint Joe and Denver City	22.72	25
348	Iowa	11016	27012	Clinton, La Crescent Junction	Chicago, Dubuque & Minnesota..	178.57	30
349	Pa....	2425	.....	Irvine, Oil City	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	50.2	30
350	N. C..	5005	.. ...	Goldsborough, Morehead City	Atlantic and North Carolina	95	20
351	Mich	12955	24034	Walton Junction, Traverse City.	Continental Improvement Co	26.26	20
352	Mass	672	639	New Bedford, West Wareham.	New Bedford, (late New Bedford and Taunton.)	16¼	36
353	Mass	.....	737	Cohasset Narrows, Wood's Hole.	Cape Cod, operated by Old Colony and Newport.	17.67	25
354	Ind...	12026	22026	Auburn, Logansport.....	Detroit, Eel River and Illinois ...	82.8	25½
355	Ohio..	9008	.....	Elyria, Millbury	Lake Shore & Michigan Southern	74.98	25
356	Wis ..	13017	25012	Winona, Winona Junction..	Chicago and Northwestern.....	28	25
357	Mass	731	653	South Braintree Junction, Fall River,	Old Colony and Newport.....	34	30
358	Vt....	521	410	West Concord, Hyde Park..	Portland and Ogdensburgh	58.93	30
359	Mo ...	10523a	29022	Road House, Mexico.....	Chicago and Alton.....	90	25
360	Vt....	523	522	Richford, Newport.....	Missisquoi and Clyde Rivers.....	31.38	30
361	Md ...	3518	.....	Saint Denis, Point of Rocks	Baltimore and Ohio	60	22
362	Wis ..	13014	25014	Elroy, Saint Paul.....	West Wisconsin	198.40	23
363	N. H..	331	261	Groveton Junction, Wells River.	Boston, Concord and Montreal ...	53.1	25
364	Mass	745	660	Worcester, Gardner.....	Boston, Barre and Gardner	27	25
365	Ill....	11903	23025	Hannibal, Naples	Toledo, Wabash and Western	45.5	18
366	Nebr	14483	34005	Nebraska City, Seward	Midland Pacific.....	84.1	17
367	N. Y..	1030	1214	Canandaigua, Niagara Falls	New York Central and Hudson River.	97	30
368	Pa....	2464	.....	Pittsburgh, Cumberland....	Pittsburgh and Connellsville.....	147.8	25
369	Nebr	14479	34004	Omaha, Concord	Burlington and Missouri River in Nebraska.	21½	20
370	Wis ..	13396	25016	Milwaukee, Green Bay, Menasha.	Wisconsin Central, operated by Phillips & Colby Construction Company.	127.54	20
371	Utah	16633	41001	Salt Lake City, Ogden.....	Utah Central	36.50	15
372	N. Y..	1228	1229	Utica, North Norwich.....	Delaware, Lackawanna & Western	48¼	21
373	Cal	14876	46010	Lathrop, Goshen	Central Pacific.....	144.91	30
374	Mo ...	10502	28002	Bismarck, Argenta	Saint Louis and Iron Mountain and Cairo and Fulton.	262	17½
375	Mich	12511	24010	Jackson, Grand Rapids.....	Michigan Central	94½	25
376	Mich	12505	24004	White Pigeon, Kalamazoo...	Lake Shore and Michigan Southern	38.33	22
377	Vt....	520	409	Saint Albans, Richford	Central Vermont, (late Vermont Central and Vermont & Canada.)	26.66	15
378	Colo ..	17051	38003	Hughes' Station, Erie	Denver and Boulder Valley	15	15
379	Minn	13505	26004	Saint Paul, Sioux City	Saint Paul and Sioux City.....	245	30
380	Minn	13508	26006	Saint Paul, Du Luth	Lake Superior and Mississippi...	156	20
381	N. Y..	1036	1215	Buffalo, Lockport.....	New York Central and Hudson River.	22	30
382	Ill	11432	23011	Burlington, Quincy	Chicago, Burlington and Quincy..	71.85	214
383	Ill	11414	23038	Peoria, Jacksonville	Peoria, Pekin and Jacksonville ..	37.40	20
384	Cal ...	14945	46014	Goshen, Tipton	Southern Pacific.....	21	30
385	Ind ...	12013	22013	State Line, Logansport.....	Pittsburgh, Cincinnati and Saint Louis.	61	30
386	Nebr	14451	34002	Plattsmouth, Kearney Junction.	Burlington and Missouri River in Nebraska.	191	20
387	Wis ..	13003	25013	Racine, Rock Island Junction	Western Union	188.40	30
388	Colo ..	17064	38001	Denver, Pueblo	Denver and Rio Grande.....	119	17
389	Va	4413	.....	Petersburgh, Lynchburgh ...	Atlantic, Mississippi and Ohio ...	123	25
390	Mass..	619	618	Salem, Gloucester.....	Eastern.....	16	30

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
21,171	9,488	30,659	10,779	359	b. c.; no r. a	12	$55 00		346
19,438	9,011	28,449	9,065	302	17 by 7, f. f., s. l.	6	55 00		347
17,687	11,916	29,603	8,703	290	18 by 9, 12.2 by 7, f. f. c., s. l.	6	55 00	In October, 1873	348
.....	.....	.....	8,379	279	8 by 7, f. f., s. l.	12	55 00	Part; residue $85, (210.)	349
8,799	5,209	14,008	8,188	273	7.10 by 6.6, f. f., s. l.	6	55 00		350
5,258	2,939	8,197	7,774	259	14 by 7, s. l.	6	55 00		351
3,555	3,523	7,078	5,692	190	2.7 by 1.11, locked; no r. a.	15*	55 00		352
6,451	2,713	9,164	8,064	268	b. c.; no r. a	6	53 00		353
9,374	11,201	20,575	6,815	227	15 by 10, f. f., s. l	6	52 00		354
1019745	175,891	1195636	1172631	39,087	r. p. o., 51.6 by 10.9, f. f. c. and m. c., d. l.	26	50 00		355
91,668	31,256	122,924	122,924	4,097	r. p. o., (say) 40 by 10.3, f. f. c., s. l., and r. a. on w. t.	12	50 00	r. p. o., with platforms, 46 by 10.3.	356
75,981	52,750	128,731	75,035	2,501	12.6 by 9, f. f., m. c., d. l. to Middleborough, 25.07 miles; no r. a. residue.	12	50 00		357
45,015	41,397	86,412	67,841	2,261	15 by 6.6, f. f., s. l.	6	50 00		358
48,817	22,230	71,047	42,568	1,419	r. p. o., 32 by 10, f. f. c. and m. c., s. l.	14½	50 00	In May, 1874	359
30,115	20,443	40,558	38,874	1,295	13.5 by 7.4, f. f., s. l.	6	50 00		360
25,001	18,758	43,759	31,376	1,045	17 by 8.7½, f. f., s. l.	12	50 00	In August, 1874	361
26,090	19,932	46,022	25,664	855	40 by 8, f. f. c., s. l.	12	50 00	Main route; branch $30, (719.)	362
17,754	22,036	39,790	24,339	811	17 by 6.8, f. f., s. l.	10§*	50 00		363
14,351	12,148	26,499	22,704	757	10 by —, fixtures, d. l.	12	50 00		364
9,281	23,129	32,410	22,614	753	12 by —, f. f., s. l.	12	50 00	Main route; branch $50, (533.)	365
4,944	3,361	8,305	3,517	117	12 by 7, f. f., s. l.	6	50 00		366
26,489	20,159	46,648	21,346	711	14.6 by 8.6, 11 by 9, f. f., s. l.	6	50 00		367
23,670	24,974	48,644	20,942	698	14.6 by 8.6, f. f. and m. c., s. l.	12	50 00	Main route; branches $50, (441, 601.)	368
14,631	6,855	21,489	20,717	690	18.6 by 7, f. f., s. l.	6	50 00		369
26,986	15,724	42,710	19,758	658	14.2 by 7 10, f. f., s. l	6	50 00	In May, 1874	370
6,259	14,347	20,606	19,580	652	No r. a.	14	50 00		371
24,056	14,143	38,199	19,135	637	19.3 by 6.7, f. f., s. l.	12	50 00		372
17,532	7,616	25,148	19,026	633	14.7 by 8.10, f. f., s. l.	7	50 00		373
20,394	16,270	36,664	18,687	623	10.4 by 6.10, s. l.	12	50 00	Branch; main route $100, (167.)	374
17,409	7,560	24,969	17,647	588	14 by 10, f. f., s. l.	6	50 00		375
16,261	7,486	23,747	17,158	572	17.3 by 9, f. f., s. l.	12	50 00		376
11,291	9,188	20,479	16,704	556	9.8 by 7.9, f. f., s. l.	6	50 00		377
10,798	6,562	17,360	16,499	550	— by —, f. f., s. l.	6	50 00	Weight reported to Boulder City, 27 miles.	378
34,729	19,705	54,434	16,377	545	20.3 by 9.3, 22.4 by 9 3, f. f., s. l	8½*	50 00	86¾ miles at $75; distance counted only to Lemara.	379
16,509	6,923	23,432	16,318	543	30 by 10, f. f., s. l.	7½*	50 00		380
8,583	12,930	21,513	16,278	542	b. c	12	50 00		381
12,848	11,648	24,496	15,793	526	10 by 7, f. f., s. l	6	50 00		382
13,453	12,445	25,898	15,751	525	13 by 8, f. f., s. l	6¢*	50 00	Additional trips for portion of year; in March, 1874.	383
12,125	5,345	17,470	15,223	507	14.7 by 8.10, f. f., s. l	7	50 00		384
11,384	10,590	21,974	14,933	498	24 by 8, f. f. c., s. l.	6	50 00		385
21,689	13,224	34,913	14,503	483	18.6 by 7, f. f., s. l	6	50 00		386
21,579	27,848	49,427	13,498	450	23 by 10, f. f., s. l.	6	50 00		387
12,891	7,170	20,061	13,014	433	9 5 by 5.10, f. f., s. l	7	50 00		388
11,617	12,650	24,267	13,006	433	21 by 9, f. f., s. l.	6	50 00		389
8,496	5,992	14,398	12,069	402	No r. a	18	50 00		390

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
391	N. Y..	1042	1225	Oswego, Richland	Rome, Watertown and Ogdensburgh.	28½	30
392	W. Va.	4293	.....	Huntington, Hinton	Chesapeake and Ohio	150.42	22
393	N. Y..	1010	1204	Newburgh, Chester	Erie	19.75	30
394	N. Y..	1582	1263	Port Henry, Ticonderoga	New York and Canada, (late Vermont Central and Vermont and Canada.)	17	24
395	N. Y..	1574	1203	Buffalo, Suspension Bridge.	Erie	25.94	30
396	Va....	4412	.....	Petersburgh, Norfolk	Atlantic, Mississippi and Ohio	61½	25½
397	Mass..	656	636	Braintree Depot, Cohasset Junction.	South Shore	12	25
398	N. Y..	1024	1226	Watertown, Cape Vincent	Rome, Watertown and Ogdensburgh.	26	30
399	Iowa..	11010	27022	Waterloo, Mona	Illinois Central	80	15
400	Minn	13838	26005	Du Luth, Moorhead	Northern Pacific	229	30
401	Ill	11409	23008	Elmwood, Buda	Chicago, Burlington and Quincy..	45	15½
402	Mass .	637	628	Ayer, Mason Village	Fitchburgh	23	25
403	Mass .	703	649	South Vernon Junction, Keene.	Cheshire and Ashuelot	24	24
404	Cal ...	14705	46005	Sacramento, Folsom City	Sacramento Valley	23.2	30
405	Ill	11901	23012	Streator, Aurora, Batavia	Chicago, Burlington and Quincy..	69.79	24½
406	N. H..	309	260	Brock's Crossing, Conway	Portsmouth, Great Falls and Conway.	64.83	20
407	Wis..	13018	25017	Menasha, Neenah, Stevens' Point.	Wisconsin Central, (built and operated by Phillips & Colby Construction Company.)	65.27	30
408	Ill	11409	23008	Rushville, Yates City	Chicago, Burlington and Quincy.	63.75	15½
409	Pa	2452	.....	Greenville, Harrisville	Chenango and Allegheny	33.5	25
410	Ill	11428	23040	Peoria, Rock Island	Peoria and Rock Island	92	30
411	N. Y..	1509	1249	Buffalo, Emporium	Buffalo, New York and Philadelphia.	123.51	25
412	Conn .	976	914	Hartford, New Saybrook	Connecticut Valley	43.16	30
413	Mo ...	10506	28006	Saint Joseph, Hopkins	Kansas City, Saint Joseph and Council Bluffs.	61½	24
414	N. Y..	1542	1276	Athens, Fairhaven	Southern Central	122	30
415	Mass .	641	632	South Framingham, Milford	Boston and Albany	12	25
416	N. H..	256	255	Concord, Portsmouth	Concord	60	25
417	Conn .	981	917	Litchfield, Hawleyville	Spepaug, (late Spepang Valley)	3½	15
418	Mass .	735	656	Mansfield, South Framingham.	Boston, Clinton and Fitchburgh..	22	25
419	Ky ...	9843	20016	Maysville, Paris	Maysville and Lexington	50	30
420	N. Y..	1405	1228	Chenango Forks, Norwich	Delaware, Lackawanna and Western.	30.69	21
421	Colo ..	17038	38004	Denver, Black Hawk	Colorado Central	38½	20
422	Mo ...	10520a	28019	Quincy, Kirksville	Quincy, Missouri and Pacific	71.22	16
423	Iowa .	11018	27007	Creston, Hopkins	Burlington and Missouri River	44.4	22
424	Ind ..	12019	22019	Fort Wayne, Connersville	Fort Wayne, Muncie and Cincinnati.	109	22
425	Mich .	12516	24016	East Saginaw, Reed City	Flint and Pere Marquette	90.47	18
426	Mich .	12509	24008	Jackson, Fort Wayne	Fort Wayne, Jackson & Saginaw	96.30	22
427	Mass .	658	741	Springfield, Athol	Springfield, Athol and Northeastern, (late Athol & Enfield.)	52.46	30
428	Mo ...	10519a	28018	Quincy, Keokuk	Mississippi Valley and Western..	41	20
429	N. J ..	2109	.....	Philadelphia, Hightstown	Pennsylvania	52.5	30
430	Pa	2413	.....	Pottsville, Herndon	Philadelphia and Reading	21.1	17½
431	Iowa .	11003	27005	Red Oak, Eastport	Burlington and Missouri River ..	50	21½
432	Ill	11414	23038	Peoria, Jacksonville	Peoria, Pekin and Jacksonville..	37.40	20
433	Me ...	188	10	Oldtown, Guilford	Consolidated European and North American, (late Bangor and Piscataquis.)	42.1	17
434	N. Y..	1566	1269	Ithaca, Cortland Village	Utica, Ithaca and Elmira	23	9
435	Ala ..	6615	.....	Chattanooga, Meridian	Alabama and Chattanooga	290	12

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
8,236	8,609	16,845	11,550	385	No r. a	15	$50 00		391
12,330	14,031	26,361	11,502	383	20.7 by 6.10, f. f., s. l	6	50 00		392
8,147	10,219	18,366	11,325	377	b. c.; no r. a	12	50 00	Main route; branch $50, (539.)	393
5,373	6,609	11,982	11,115	370	14 by 6.8, f. f., s. l	6	50 00		394
10,342	726	11,068	11,068	369	b. c.; no r. a	13	50 00		395
9,235	5,961	15,196	11,070	369	21 by 9, f. f., s. l	6	50 00		396
10,685	6,525	17,210	11,022	367	b. c.; no r. a	12	50 00		397
9,619	5,203	14,822	10,923	364	No r. a	12	50 00		398
13,811	9,527	23,338	10,875	362	19.1½ by 9.2, f. f., s. l	12	50 00		399
10,253	5,256	15,509	10,849	361	13 by 7, f. f., s. l	6	50 00		400
4,516	10,026	14,534	10,691	356	22 by 8.6, f. f., s. l	6	50 00	Branch; main route $50, (408.)	401
9,605	6,338	15,943	10,511	350	6 by 6, f. f., s. l	12	50 00		402
5,728	10,765	16,493	10,483	349	13.8 by 7.1, fixtures, s. l	12	50 00		403
7,094	3,384	10,478	10,478	349	6.6 by 5; no r. a	12	50 00		404
8,058	10,918	18,977	10,330	344	14 by 7, f. f., s. l	6	50 00		405
14,146	7,852	21,998	10,328	344	13 by 6, f. f., s. l	7*	50 00		406
9,371	4,559	13,930	10,097	336	14.2 by 7.10, f. f., s. l	6	50 00		407
7,072	12,636	19,708	9,954	331	22 by 8.6, f. f., s. l	6	50 00	Main route; branch $50, (401.)	408
9,155	6,081	15,236	9,935	331	12.6 by 8, f. f., s. l	6	50 00		409
10,997	9,817	20,814	9,877	329	12 by 7, f. f., s. l	6	50 00		410
13,938	10,735	24,673	9,873	329	12 by 7.6, f. f., s. l	12	50 00		411
12,310	10,815	23,125	9,747	324	11 by 7, f. f., s. l	12	50 00		412
9,068	7,548	16,616	9,681	322	14.2 by 7, f. f., s. l	6	50 00	Branch; main route $140, (104.)	413
24,690	25,798	50,488	9,645	321	15 by 8, f. f., s. l	6	50 00		414
6,854	4,954	11,808	9,568	318	No apt	24	50 00		415
9,395	14,211	23,606	9,474	315	12 by 6.8, f. f., s. l	12	50 00		416
6,082	8,236	14,318	9,431	314	9.6 by 6.6, f. f., s. l	12	50 00		417
7,898	6,158	14,047	9,448	314	No r. a	16½*	50 00		418
4,205	10,985	15,190	9,396	313	12 by 9, f. f., s. l	6	50 00		419
6,963	6,416	13,379	9,302	310	19.3 by 6.7, f. f., s. l	12	50 00		420
8,907	4,392	13,299	9,310	310	Express car, s. l	7	50 00	Main route; branch $50, (598.)	421
8,533	7,264	15,797	9,243	308	14 by 7, f. f. c., s. l	6	50 00		422
6,10-	4,728	10,838	9,180	306	13 by 8.6, f. f., s. l	6	50 00		423
11,005	12,543	23,548	9,192	306	12 by 7.8, f. f., s. l	6	50 00		424
11,195	6,017	17,212	8,790	293	21 by 8.10½, f. f., s. l	7½*	50 00		425
10,576	10,526	21,102	8,804	292	10.6 by 7.6, f. f., s. l	6	50 00		426
8,045	6,094	14,129	8,743	291	12 by 6.6, f. f., s. l	6	50 00		427
8,648	6,823	15,471	8,696	290	12 by 6.9, f. f., s. l., 13 by 9 add'l for through mails.	6	50 00		428
12,586	11,601	24,187	8,463	282	8 by 6.6, fixtures, s. l	9½*	50 00	25 miles at $75; main route; branch $50, (632.)	429
12,992	13,692	26,684	8,281	276	10 by 7, 9 by 6, 6.6 by 6.4, f. f., s. l.	10½*	50 00		430
8,688	4,331	13,019	8,286	276	14 by 7, f. f., s. l	10*	50 00	Branch; main route $175, (60.)	431
9,092	8,391	17,483	8,043	268	13 by 8, f. f., s. l	6½*	50 00	Additional trips for portion of the year. In November, 1873.	432
7,618	4,864	12,482	8,027	267	18 by 7, f. f., s. l	6	50 00		433
4,325	6,765	11,290	8,013	266	10.6 by 6.11, f. f., d. l	12	50 00	In May, 1874	434
17,865	15,645	33,510	7,953	265	10 by 8, f. f., s. l	7	50 00		435

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
436	Conn.	977	915	New Haven, Ansonia	New Haven and Derby	13.50	22
437	Ind.	12014	22014	Peru, La Porte	Chicago, Cincinnati & Louisville	73	26
438	Ala.	6602	.....	Montgomery, Selma	Western, of Alabama	50	15
439	Pa.	2405	.....	Philadelphia, Norristown	Philadelphia and Reading	16.24	17
440	N. Y.	1454	1248	Utica, Smith's Valley Station	New York and Oswego Midland	31.4	17
441	Pa.	2464	.....	Connellsville, Uniontown	Pittsburgh and Connellsville	12	15
442	Ill.	11920	23051	Streator, Pekin	Chicago, Pekin and Southwestern	65.2	20
443	Ky.	9610	20007	Lebanon Junction, Fish Point.	Louisville and Nashville	109.9	18
444	Mo.	10509	28009	Centralia, Columbia	Saint Louis, Kansas City and Northern. (late North Missouri.)	22	15
445	N. Y.	1545	1231	Cassville Junction, Richfield Springs.	Delaware, Lackawanna & Western.	21	21
446	Pa.	2415	.....	Sunbury, Tomhicken	Pennsylvania	44.1	20
447	N. Y.	1577	1267	Syracuse, Lacona	Syracuse Northern	44.92	20
448	Me.	201	11	Belfast, Burnham	Maine Central, Belfast division	34.19	20
449	Iowa	11005*a*	27015	Des Moines, Indianola	Chicago, Rock Island and Pacific	21.4	17
450	N. J.	2119	.....	New York, New Bridge	Erie, (late Hackensack & N. York.)	16.5	30
451	N. C.	5216	.....	Raleigh, Sandford	Raleigh and Augusta Air-line	45.72	30
452	Mass.	602	602	Rollingsford, Great Falls	Boston and Maine	3	...
453	N. Y.	1043	1252	Brocton, Corry	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Buffalo, Corry and Pittsburgh.)	45.3	20
454	Wis.	13011	25020	Warren, Mineral Point	Mineral Point	33	14
455	Del.	3403	.....	Clayton, Easton	Maryland and Delaware	44	20
456	Ill.	11405	23007	Galva, Keithsburgh	Chicago, Burlington and Quincy	59.30	22½
457	Mass.	742	659	South Framingham, Lowell	Boston, Clinton and Fitchburg	29	28
458	Minn.	13840	26003	East Saint Cloud Junction, Melrose.	Saint Paul and Pacific	35	14
459	R. I.	821	804	Warren, Fall River	Fall River, Warren & Providence	7	24
460	Minn.	13506	26001	Saint Paul, Breckenridge	Saint Paul and Pacific	219.25	17
461	Mich.	12529	24028	Jonesville, Lansing	Lake Shore and Michigan Southern.	60.87	20
462	N. J.	2128	.....	Newark, Paterson	Erie	13.12	30
463	Wis.	13007	25004	Milton Junction, Monroe	Chicago, Milwaukee and Saint Paul, (late Milwaukee & Saint Paul.)	42.8	15
464	Iowa	11008	27010	Albia, Northwood	Central, of Iowa	189.2	20
465	Ind.	12012*a*	22012*a*	Terre Haute, Rockville	Logansport, Crawfordsville and Southwestern, (late Evansville and Crawfordsville.)	23	24
466	Mass.	738	657	Winchendon, Peterborough	Monadnock	16	20
467	Mich.	12510	24009	Jackson, Roscommon	M'chigan Central, lessees Jackson, Lansing and Saginaw.	190.80	19½
468	Ind.	12006	22006	Columbus, Madison	Jeffersonville, Madison and Indianapolis.	46	15
469	Tenn.	10123	19016	Nashville, Lebanon	Tennessee and Pacific	32½	15
470	Pa.	2431	.....	Columbia, Sinking Spring	Reading and Columbia	39.7	19½
471	Iowa	11011	27029	California Junction, Wisner	Sioux City and Pacific	83.4	15
472	Va.	4404	.....	Alexandria, Hamilton	Washington and Ohio	45	23
473	Ohio	9024	.....	Fremont, Lima	Lake Erie and Louisville	62.85	24
474	Conn.	975	913	New Haven, Willimantic	New Haven, Middletown and Willimantic.	56	25
475	N. H.	308	259	Dover, Alton Bay	Boston and Maine	22	24
476	Mass.	636	627	Ayer, Lowell	Boston and Lowell and Nashua and Lowell.	17	25
477	Mich.	12504	24013	Adrian, Jackson	Lake Shore and Michigan Southern.	47.20	30
478	Wis.	13395	25015	Green Bay, Winona	Green Bay and Minnesota	216.41	20
479	Wis.	13394	25008	Oshkosh, Ripon	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	21	30
480	Mass.	615	614	Boston, Mattapan	Old Colony and Newport	8½	15

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
5,891	4,089	9,980	7,878	262	No r. a	12	$50 00		436
8,075	6,947	15,022	7,730	257	12 by 8, f. f., s. l	12	50 00		437
5,162	3,826	8,988	7,731	257	18.4 by 8.8, f. f., s. l	7	50 00		438
4,225	4,002	8,227	7,720	257	No r. a	12	50 00		439
8,396	5,535	13,931	7,690	256	18.3 by 7.3, f. f., s. l	6	50 00	In July, 1874	440
5,520	3,180	8,700	7,681	256	b. c.; no r. a	12	50 00	Branch; main route $50, (368.)	441
6,483	6,012	12,495	7,672	255	18 by 9, f. f., s. l	6	50 00		442
15,296	7,393	22,689	7,638	254	14.10 by 7.6, f. f., s. l	6	50 00	Main route; branch $50, (544.)	443
3,926	4,031	7,957	7,487	249	No r. a	12	50 00		444
8,001	4,167	12,168	7,464	248	19 by 6.7, f. f.; no r. a	12	50 00		445
4,548	7,464	12,012	7,433	247	8.10 by 5.7. f. f., s. l	6	50 00		446
9,650	6,756	16,406	7,381	245	9 by 7, f. f., s. l	12*	50 00		447
4,651	5,192	9,843	7,315	244	12 by —, fixtures, s. l	12	50 00		448
6,978	3,168	10,146	7,315	243	10 by 6, fixtures, s. l	6	50 00	Main route; branch $50, (529.)	449
4,209	3,636	7,845	7,297	243	b. c.; no r. a	6	50 00		450
7,045	3,470	10,515	7,240	241	11 by 6, f. f., s. l	6	50 00	Main route; branches $50 and $21.	451
4,266	2,909	7,175	7,175	239			50 00	Branch; main route $150, (82.)	452
8,775	3,436	12,211	7,158	238	8 by 7, f. f., s. l	18	50 00		453
6,014	2,960	9,004	6,998	233	6 by 4; no r. a	6	50 00		454
6,091	4,713	10,804	6,964	232	10 by 6, f. f., s. l	6	50 00		455
7,966	3,808	11,774	4,856	228	10 by 8.6, f. f., s. l	6	50 00	Branch; main route $225, (24.)	456
5,299	4,231	9,530	6,831	227	14 by 6.9, f. f., d. l	12	50 00		457
8,416	3,196	11,612	6,708	223	12.6 by 9, f. f., s. l	6	50 00		458
4,892	1,701	6,593	6,593	220	No r. a	6	50 00		459
15,067	7,744	22,811	6,578	219	20 by 7, f f., s. l	7*	50 00		460
9,097	3,497	12,594	6,478	215	11.8 by 9, f. f., s. l	6	50 00		461
6,033	1,820	7,853	6,464	215	b. c.; no r. a	6	50 00		462
7,187	4,603	11,790	6,429	214	14 by 10.3, f. f., s. l	6	50 00		463
10,589	17,932	28,521	6,431	214	12.3 by 8.11, f f., s. l	6	50 00		464
4,389	3,182	7,571	6,394	213	12.6 by 8, f. f., s. l	12	50 00		465
5,450	3,941	9,391	6,412	213	5.9 by 3, f. f., s. l	12	50 00	In June, 1874	466
15,618	10,724	26,342	6,369	212	14 by 10, f. f. c., s. l	9*	50 00		467
7,868	4,261	12,129	6,265	209	10.9 by 6, f. f., s. l	6	50 00		468
5,159	2,687	7,846	6,253	208	30 by 8. f. f., s. l	6	50 00		469
8,022	6,686	14,708	6,195	206	6.8 by 6.2 f. f., s. l	8½*	50 00	Main route; branch $50, (483.)	470
7,350	4,417	11,767	6,116	204	12 by —, f. f	6	50 00	Part; residue $75, (243.) In May, 1874.	471
6,664	3,489	10,153	6,079	203	12 by 6, f. f., s. l	6	50 00		472
8,658	7,065	15,723	6,002	200	13 by 7, fixtures, s. l	6	50 00		473
10,149	8,273	18,422	6,011	200	10 by 7, 11.9 by 6.10, f. f., s. l.	8½*	50 00		474
6,506	3,638	10,234	5,912	197	6.8 by 6.7, f. f., s. l	12	50 00		475
3,916	3,741	7,657	5,879	196	8.5 by 6.8, f. f., s. l	12	50 00		476
9,003	3,040	12,043	5,901	196	12.9½ by 8.11½, f. f., s. l	6	50 00		477
12,195	8,679	20,874	5,881	196	12.2 by 7.2½, f. f., s. l	6	50 00	In June, 1874	478
3,037	3,506	6,543	5,803	193	22.6 by 10.3, f. f., s. l	6	50 00		479
3,824	2,651	6,475	5,731	190	b. c.; no r. a	12	50 00		480

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
481	Ky ...	9846*a*	20017	Lexington, Mount Sterling..	Louisville, Cincinnati and Lexington.	33.84	30
482	Pa....	2454	.....	Freeport, Butler	Pennsylvania	21.3	12
483	Pa....	2431	.....	Junction, Frederick.....	Reading and Columbia.....	7.8	19
484	N. Y..	1589	1284	Cayuga, Ithaca.....	Cayuga Lake	38.05	20
485	N. Y..	1580	1265	Dunkirk, Titusville	Dunkirk, Allegheny Valley and Pittsburgh	91.16	20
486	Pa....	2437	.....	Altoona, Martinsburgh	Pennsylvania.....	22.3	15
487	Mich .	12526	24025	Jackson, Niles	Michigan Central.....	103	25
488	Mich .	12521	24021	Holland, Grand Rapids	Chicago and Michigan Lake Shore	25.4	20
489	Conn .	945	910	Bethel, Hawleyville.....	Danbury and Norwalk	6	22
490	Pa....	2418	.....	Scranton, Carbondale	Delaware and Hudson Canal	17.11	15
491	N. Y..	1586	1240	Walton, Delhi.....	New York and Oswego Midland	16	17
492	Mich .	12520	24020	Lansing, South Bend.....	Chicago and Lake Huron, (late Peninsular.)	122.72	25
493	N. Y..	1540	1235	Summitville, Ellenville.....	New York and Oswego Midland	8	12
494	Wis ..	13016	25023	Madison, Portage City.....	Chicago and Superior, (late Madison and Portage.)	39.50	15
495	Ohio ..	9009	.....	Bayard, New Philadelphia ..	Cleveland and Pittsburgh	32½	15
496	Pa ...	2438	.....	Cresson, Ebensburgh.....	Pennsylvania	11	11
497	Minn	13512	26008	Saint Paul, Stillwater.....	Lake Superior and Mississippi ..	13.20	20
498	Conn .	972	912	Vernon Depot, Rockville....	Hartford, Providence and Fishkill, (late Rockville.)	4½	22
499	Ga....	6015	.....	Renwick, Albany	Southwestern.....	22½	30
500	Nebr .	14478	34003	Omaha, Herman	Omaha and Northwestern	40.2	15
501	N. Y..	1008	1234	Hicksville, Northport	Long Island.....	16½	22
502	N. Y..	1576	1268	Rondout, Stamford.....	New York, Kingston and Syracuse. (Trustees first-mortgage bonds.)	73.3	15
503	Cal ...	14981	46012	Stockton, Milton	Stockton and Copperopolis	30	30
504	Mass	617	616	Boston, Dedham	Boston and Providence	11	20
505	Cal ...	14708	46008	Napa Junction, Calistoga ...	California Pacific	36	24
506	Md ...	3501	.....	Perryville, Port Deposit	Philadelphia, Wilmington and Baltimore.	4	12
507	N. Y..	1581	1264	Syracuse, Earlville.....	Syracuse and Chenango.....	42.47	20
508	Pa....	2433	.....	Hanover Junction, Frederick	Hanover Branch.....	50.4	15
509	Ohio ..	9036	.....	Means, Cadiz	Pittsburgh, Cincinnati and Saint Louis.	8	15
510	Ind ...	12001	22001	Indianapolis, Vincennes....	Indianapolis and Vincennes, operated by the Pennsylvania Company.	116.22	30
511	Cal ...	14709	46009	Marysville, Oroville	California Northern	30	25
512	N. Y..	1544	1244	Cobleskill, Cherry Valley ..	Delaware and Hudson Canal....	22.47	20
513	N. Y.	....	1290	Buffalo, Gowanda.....	Buffalo and Jamestown	34.25	15
514	Pa ...	2432	.....	York, Columbia.....	Pennsylvania.....	13.5	14
515	Nebr	14497	34006	Crete, Beatrice.....	Burlington and Missouri River in Nebraska.	31.76	15
516	Mich	12522	24022	Port Huron, Flint.....	Chicago and Lake Huron	68	25
517	Mo ...	10522*a*	28021	Mexico, Cedar City	Chicago and Alton	50.62	24
518	Fla	6404	.....	Pensacola, Whiting Junction	Pensacola and Louisville.....	44	15
519	Mass .	728	652	Wakefield, Newburyport...	Boston and Maine	3½	20
520	N. J ..	2125	.....	Rocky Hill, Monmouth.....	Pennsylvania	8	20
521	Ill	11916	23026	La Fayette, Bloomington....	Toledo, Wabash and Western ...	116.40	21
522	N. H..	254	253	Franklin, Bristol.....	Northern	13	15
523	N. Y..	1562	1272	Canastota, Cazenovia	Cazenovia, Canastota and De Ruyter. (late Cazenovia and Canastota.)	15	20
524	Mich .	12518	24018	Fort Wayne, Walton	Grand Rapids and Indiana.....	200.1	22
525	Cal ...	14881	46012	Peters, Oakdale.....	Stockton and Copperopolis.....	19	8
526	Ala....	6608	.....	Columbus, Troy.....	Mobile and Girard	98	15
527	Md	3509	.....	Cambridge, Seaford	Dorchester and Delaware.....	33.5	15

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
5,230	2,992	8,222	5,686	189	b. c., not partitioned; f. f., s. l.	12	$50 00		481
4,609	2,427	7,036	5,672	189	8 by 6, f. f., d. l	12	50 00		482
1,965	3,907	5,872	5,674	189	No r. a	12	50 00	Branch; main route $50. (470.)	483
7,240	4,121	11,361	5,589	186	8. 4 by 7, f. f., s. l	6	50 00		484
7,783	7,912	15,695	5,559	185	10 by 7, f. f., s. l	6	50 00		485
8,638	5,354	13,992	5,578	185	b. c.; no r. a	10½*	50 00	Main route; branches $50, (636, 637.)	486
7,506	7,484	14,990	5,501	183	14 by 10, f. f. c., s. l	6	50 00		487
5,648	7,365	13,013	10,914	182	12 by 10, s. l	6	50 00	Branch; main route $80, (216;) 60 days, in September, 1873, and January, 1874.	488
4,250	1,202	5,452	5,452	181	8 by 6, f. f., s. l	12	50 00	Branch; main route $85.11, (201.)	489
3,996	2,106	6,102	5,377	179	6 by 6, f. f., d. l	12	50 00		490
3,123	3,524	6,647	5,260	175	No apt	6	50 00	In July, 1874	491
7,928	9,807	17,735	5,236	174	10 by 6, f. f., s. l	8½*	50 00		492
3,041	3,007	6,048	5,215	173	No apt	12	50 00	Branch. In July, 1874	493
3,710	3,959	7,669	5,172	172	— by —, fixtures, s. l	6	50 00		494
7,413	4,519	11,932	5,174	172	13 by 9, f. f., s. l	6	50 00		495
2,617	2,545	5,162	5,162	172	b. c.; no r. a	12	50 00		496
5,437	2,253	7,690	5,132	171	No r. a	18	50 00		497
3,444	2,032	5,476	5,012	167	b. c.; no r. a	18	50 00		498
2,577	3,362	5,939	5,006	166	No apt.; s. l	10	50 00	Branch; main route $75, (264,) and branch $40, (671.)	499
5,554	2,200	7,754	4,961	166	12 by 7, f. f., s. l	6	50 00	In May, 1874	500
5,341	2,614	7,955	4,964	165	6 by 4, in b. c.; no r. a	12	50 00		501
10,838	5,996	16,834	4,933	164	½ car, f. f., s. l	6	50 00		502
5,543	2,021	7,564	4,928	164	9. 10 by 8. 10, f. f., s. l. 15 miles, b. c. residue.	7	50 00	Main route; branch $50, (525.)	503
3,601	2,530	6,131	4,918	164	No apt	12	50 00		504
5,580	2,768	8,348	4,902	163	8. 10 by 7. 4, f. f., s. l	7	50 00		505
1,877	2,992	4,869	4,869	162	No r. a	6	50 00	Branch; main route $375, (10.)	506
7,325	4,171	11,496	3,825	161	8 by 8, f. f., s. l	9*	50 00		507
11,263	9,261	20,524	4,773	159	12 by 6, f. f., d. l. 12¾ miles, s. l. residue.	7½*	50 00		508
1,610	3,166	4,776	4,776	159	12 by 8.6, s. l	12	50 00	Branch; main route $275, (20.)	509
9,123	5,463	14,586	4,745	158	10 by 6, f. f., s. l	6	50 00		510
3,853	1,434	5,287	4,715	157	In b. c.; no r. a	7	50 00	In May, 1874	511
4,115	3,056	7,171	4,671	155	No r. a	12	50 00		512
5,875	3,084	8,959	4,653	155	r. a. in b. c	6	50 00		513
2,643	3,436	6,079	4,676	155	b. c.; no r. a	6	50 00		514
4,138	2,477	6,615	4,665	155	6.6 by 5.8, f. f., s. l	6	50 00		515
4,370	4,591	9,561	4,605	153	10 by 7, f. f., s. l	6	50 00		516
3,901	4,548	8,449	4,568	152	17 by 10, s. l	6	50 00	In May, 1874	517
1,664	3,080	4,744	4,574	152	6. 9 by 4. 10, f. f., s. l	7	50 00		518
7,375	5,333	12,708	4,567	152	b. c.; no r. a	12	50 00		519
2,647	1,861	4,508	4,508	150	11 by 8.5; no r. a	6	50 00		520
10,595	9,520	20,115	4,492	149	12 by —, f. f., s. l	6	50 00		521
3,136	2,166	5,302	4,440	148	b. c.; no r. a	6	50 00	Branch; main route $140, (103.)	522
3,334	1,821	5,155	4,443	148	Box in b. c. 2.6 by 2.6, locked; no r. a.	18	50 00		523
35,462	21,097	56,559	4,388	146	14 by 7, f. f., s. l	7½*	50 00		524
3,593	1,255	4,848	4,385	146	9.10 by 8.10, f. f., s. l	7	50 00	Branch; main route $50, (503.)	525
5,462	3,707	9,169	4,298	143	12 by 6.6, f. f., s. l	6	50 00		526
3,117	4,801	7,918	4,279	142	20 by 9.8, f. f., s. l	6	50 00		527

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	With what speed
						Miles	
528	Kans.	14235	33010	Leavenworth, Holton	Kansas Central	55.62	
529	Iowa..	11005a	27015	Summerset Junc., Winterset	Chicago, Rock Island and Pacific	27.1	
530	Mich.	12522	24022	Port Huron, Flint	Chicago and Lake Huron	68	
531	Pa....	2450	.....	Lewistown Junction, Milroy	Pennsylvania	12.5	
532	Mo...	10521a	28021	Pierce City, Smithfield	Memphis, Carthage & Northwes'n	45.31	
533	Ill....	11903	23025	Maysville, Pittsfield	Toledo, Wabash and Western	6	
534	Pa....	2446	.....	Oil City, Ashtabula	Lake Shore & Michigan Southern	87.39	
535	N. Y..	1007	1232	Mineola, Locust Valley	Long Island	12½	
536	Mich.	12519	24019	Kalamazoo, South Haven	Michigan Central	39.81	
537	Pa....	2448	.....	Downingtown, Honey Brook	Pennsylvania	16	
538	Mass.	610	610	Boston, Medford	Boston and Maine	5½	
539	N. Y..	1010	1204	Vail's Gate, Junction	Erie	12.75	
540	S. C....	5707	.....	Augusta, Port Royal	Port Royal	112.2	
541	Md...	3515	.....	Bowie, Pope's Creek	Baltimore and Potomac	48.6	
542	Ill....	11907	23034	Springfield, Gilman	Gilman, Clinton and Springfield	111.60	
543	Ind...	12025	22025	La Porte, Michigan City	Indianapolis, Peru and Chicago	12.36	
544	Ky....	9610	20007	Richmond Junc., Richmond	Louisville and Nashville	33.8	
545	Ky....	9742	20012	Glasgow Junction, Glasgow	.....do	12	
546	N. Y..	1564	1270	Port Jervis, Monticello	Monticello and Port Jervis	24	
547	Mo....	10514	28013	Brunswick, Pattonsburgh	Brunswick and Chillicothe and Saint Louis, Council Bluffs and Omaha.	80.05	
548	N. H..	299	258	Contoocook Village, Hillsborough Bridge.	Contoocook River	15	
549	Ind...	12016	22016	Bradford, Loganspport	Pittsburgh, Cincinnati & St. Louis	114.6	
550	N. Y..	1009	1202	Sufferns, Piermont	Erie	18	
551	Mass.	631	624	Winchester, Woburn	Boston and Lowell and Nashua and Lowell.	3	
552	Pa....	2472	.....	Shaff's Bridge, Somerset	Somerset and Mineral Point	9.1	
553	N. C..	5280	.....	Greensborough, Salem	Northwestern North Carolina	29.31	
554	N. Y..	1579	1266	Ithaca, State Line	Ithaca and Athens	34.6	
555	Ky....	9612	20009	Paducah, Troy Station	Paducah and Memphis, (late Paducah and Gulf.)	62	
556	Mich.	12523	24023	Monteith, Muskegon	Michigan Lake Shore	64½	
557	Ill....	11405	23007	Aurora, Galena Junction	Chicago, Burlington and Quincy	13	
558	La....	8090	.....	New Orleans, Donaldsonville	New Orleans, Mobile and Texas	63.66	
559	Del...	3404	.....	Harrington, Lewes	Junction and Breakwater	40	
560	Pa....	2474	.....	Marion Junction, Richmond	Cumberland Valley	21½	
561	Md....	3512	.....	Cumberland, Piedmont	Cumberland and Pennsylvania	34	
562	N. Y..	1587	1262	East Gainsville, Perry	Rochester and Pine Creek	6.55	
563	Mass.	632	625	Porter's Station, Lexington.	Boston and Lowell and Nashua and Lowell. (late Lexington and Arlington.)	8	
564	N. J..	2117	.....	Lambertville, Flemington	Pennsylvania	12.13	
565	Minn.	13514	26010	Hastings, Glencoe	Chicago, Milwaukee & St. Paul, (late Milwaukee & St. Paul.)	74.50	
566	Ohio..	9045	.....	Black River, Uhricksville	Lake Shore & Tuscarawas Valley	102.45	
567	N. H..	269	256	Manchester, North Weare	Concord	20½	
568	Mich	12513	24012	Ridgeway, Romeo	Saint Clair and Chicago Air-Line	14.6	
569	Ala...	6606	.....	Marion Junc., Sawyerville	Selma, Marion and Memphis	45.12	
570	Conn.	980	916	Hartford, Millerton	Connecticut Western	60.1	
571	N. Y..	1541	1277	Newburgh, Millerton	Dutchess and Columbia	56.5	
572	Minn.	13841	26011	Winona, La Crescent	Chicago, Milwaukee & St. Paul, (late Milwaukee & St. Paul.)	25	
573	Iowa..	11003 3d p't	27006	Charlton, Leon	Burlington and Missouri River	37.44	
574	Md....	3511	.....	Townsend, Centreville	Queen Anne and Kent	36	
575	Iowa..	11017b	27013	Stanwood, Tipton	Chicago and Northwestern	6.81	
576	S. C..	5605	.....	Kingsville, Camden	South Carolina	37.50	
577	Ill....	11411	23027	La Harpe, Burlington	Toledo, Peoria and Warsaw	13½	
578	Mass.	676	640	Taunton, Middleborough	Middleborough and Taunton	9½	
579	Ohio..	9041	.....	Niles, New Lisbon	Atlantic and Great Western	31.94	
580	Mass.	733	655	Palmer, Winchendon	Boston and Albany	49½	
581	Mass.	616	615	Boston, West Lynn Depot	Eastern	10	

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
5,827	2,876	8,703	4,274	142	7.6 by 5, f. f., s. l	6	$50 00		528
3,874	1,880	5,754	4,483	142	10 by 6, f. f., s. l	6	50 00	Branch; main route $50, (449.)	529
6,138	4,676	10,814	4,233	141	9 by 7, f. f., s. l	6	50 00		530
2,348	3,608	5,956	4,206	140	b. c.; no r. a	12	50 00		531
6,591	3,240	9,741	4,054	135	13 by 7, f. f., s. l	7	50 00	In May, 1874	532
1,368	2,687	4,055	4,055	135	12 by —, f. f	6	50 00	Branch; main route $50, (365.)	533
6,277	9,807	16,084	4,022	134	18 by 9, f. f., s. l	6	50 00		534
3,854	2,114	5,968	3,960	132	4 by 4, in b. c.; no r. a	6	50 00		535
3,982	1,941	5,923	3,982	132	r. a. in b. c., s. l	6	50 00		536
3,346	2,226	5,572	3,981	132	b. c.; no r. a	6	50 00		537
2,475	1,500	3,975	3,975	132	.....do	12	50 00		538
2,805	4,914	7,719	3,888	130	.....do	12	50 00	Branch; main route $50, (393.)	539
6,203	4,437	10,740	3,898	129	10 by 8, f. f., s. l	6	50 00		540
.....	.....	.....	3,836	128	9.3 by 8.6, f. f., s. l	6	50 00		541
5,817	7,278	13,095	3,800	126	17.11 by 7.5, fixtures, s. l	6	50 00		542
1,649	2,131	3,780	3,780	126	12 by 8, f. f., s. l	12	50 00		543
3,816	2,693	6,509	3,777	125	14.10 by 7.6, f. f., s. l	6	50 00	Branch; main route $50, (443.)	544
2,543	1,162	3,705	3,705	123	No r. a	6	50 00		545
4,927	3,279	7,306	3,653	122	17.4 by 9.10; no r. a	6	50 00		546
6,950	4,734	11,684	3,687	122	21 by 7.6, f. f.; no r. a	6	50 00		547
3,014	1,568	4,582	3,664	122	9 by 3, f. f., s. l	12	50 00		548
9,479	7,721	17,200	3,652	121	12 by 8.6, f. f., s. l	6	50 00		549
3,022	2,493	5,515	3,588	120	b. c.; no r. a	6	50 00		550
1,915	1,662	3,577	3,577	119	36 cubic feet; no r. a	12	50 00		551
1,758	1,920	3,678	3,552	119	21 by 6, furniture; no r. a	12	50 00		552
3,043	1,552	4,595	3,575	119	21 by 8, f. f., s. l	6	50 00		553
3,935	3,924	7,859	3,549	118	12 by 7, f. f., s. l	6	50 00		554
6,209	5,440	11,643	3,558	118	9 by 7, f. f., s. l	6	50 00		555
4,544	3,472	8,016	3,475	115	10 by 8, f. f., s. l	6	50 00		556
3,113	1,846	4,959	3,432	114	No r. a	10½*	50 00	Branch; main route $225, (24.)	557
1,695	1,157	3,052	3,052	113	17 by 7, f. f., s. l	7	50 00	27 days	558
3,236	1,888	5,124	3,370	112	10 by 8, f. f., s. l	6	50 00		559
3,765	1,590	5,355	3,357	111	10 by 5, fixtures, s. l	6	50 00		560
3,733	3,394	7,127	3,306	110	10.6 by 8.8, f. f., s. l	6	50 00		561
2,043	1,208	3,251	3,251	108	No r. a	12	50 00		562
3,426	2,348	5,834	3,206	107	36 cubic feet	12	50 00		563
2,075	2,389	4,464	3,216	107	No r. a	12	50 00		564
6,178	3,630	9,808	3,185	106	23 by 10, f. f., s. l	6	50 00		565
9,928	8,556	18,484	2,760	106	14 by 7, fixtures, s. l	7*	50 00	26 days	566
3,383	1,756	5,139	3,151	105	b. c.; no r. a	12	50 00		567
3,067	603	3,670	3,140	105	Express car; no r. a	6	50 00		568
2,602	3,431	5,433	3,032	101	14 by 6.6, f. f., s. l	6	50 00		569
7,801	7,055	14,856	3,048	101	12 by 6.6, f. f., s. l	9½*	50 00		570
9,194	5,481	15,675	3,015	100	10 by 6.8, f. f., s. l	6	50 00	Main route; branch $50, (639.)	571
2,537	1,792	4,329	3,025	100	23 by 10, f. f., s. l	6	50 00		572
2,922	1,357	4,279	3,022	100	9 by 6, f. f., s. l	6	50 00		573
3,055	2,596	7,651	2,994	100	10 by 5, f. f., s. l	6	50 00		574
1,779	1,243	3,022	3,022	100	No r. a	6	50 00		575
2,373	1,724	4,097	2,984	99	16.2 by 8.2, f. f.; no r. a	6	50 00	Branch; main route $125, (123.)	576
1,729	1,603	3,332	2,977	99	18.9 by 6.7½, f. f. c., s. l	6	50 00	Branch; main route $60, (307.) In June, 1874.	577
1,765	1,690	3,455	2,964	98	No apt; no r. a	30	50 00		578
5,890	4,113	9,993	2,930	97	12.6 by 8, f. f., s. l	6	50 00		579
6,237	3,707	9,934	2,929	97	7.10 by 3, s. l	16½*	50 00		580
2,116	1,482	3,600	2,867	95	No r. a	12	50 00		581

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
582	Iowa..	11020*a*	27023	Beulah, Elkader.....	Iowa Eastern	17.75	10
583	Mass .	635	626	South Acton Depot, Hudson	Fitchburgh	9	25
584	Pa....	2451	.....	Pottsville, Frackville	Philadelphia and Reading.....	8.51	10
585	Ohio..	9048	.....	Harbor, Youngstown.....	Pennsylvania Company.....	62.1	20
586	Ga....	6013	.....	Gordon, Milledgeville	Central Railroad and Banking Co	18½	15
587	Ga....	6014	.....	Eatonton, Milledgeville....	.....do	22½	15
588	Pa....	2484	.....	Lawrenceville, Elkland	Fall Brook Coal Company.....	13	0 12
589	Mass .	727	651	Gloucester, Pigeon Cove	Eastern.....	6¼	12
590	Mass	629	623	Lowell, Lawrence.....	Boston and Lowell and Nashua and Lowell.	14	25
591	Ind...	12030*a*	22031	Evansville, Boonville	Lake Erie, Evansville and Southeastern.	18	20
592	Minn .	13837	26007	White Bear Lake, Sioux City Junction.	Lake Superior and Mississippi..	41	15
593	Pa....	2467	.....	Phœnixville, Eagle	Philadelphia and Reading	11.	12 10
594	N. Y...	.....	1289	Freeville, Scipio	Utica, Ithaca and Elmira	28.	22 20
595	Ill	11408	23004	Elgin, Geneva	Chicago and Northwestern	44	25
596	Mass	620	619	Salem, Marblehead	Eastern	4	15
597	Wis ..	13015	25021	Calamine, Platteville	Mineral Point.....	18.	20 14
598	Colo ..	17038	38004	Golden Junction, Longmont	Colorado Central	39	15
599	Mass .	746	661	Holyoke, Westfield	New Haven and Northampton ..	10.	33 25
600	N. Y..	1569	1238	Norwich, Cortland Village ..	New York and Oswego Midland	49.	21 17
601	Pa....	2464	.....	Broad Top, Mount Pleasant	Pittsburgh and Connellsville ...	9	15
602	Wis ..	13019	25022	Tomah, Grand Rapids	Wisconsin Valley.....	42	20
603	N. J ..	2120	.....	New Bridge, Nanuet Junct'n	Erie	13.	2 10
604	Pa....	2465	.....	Carbondale, Susquehanna Depot.	.....do	38.	25 20
605	Ind...	12021	22021	Marion, Goshen.....	Cincinnati, Wabash and Michigan	82	25
606	Mo ...	10516*a*	28016	Alexandria, Centreville.....	Missouri, Iowa and Nebraska...	85	20
607	Pa....	2463	.....	Topton, Kutztown	Philadelphia and Reading.....	4.	30 15
608	Mass	650	633	Canton, Stoughton	Boston and Providence, (late Stoughton Branch.)	4	15
609	N. Y..	1590	1285	Sodus Point, Gorham Station	Sodus Point and Southern	34	15
610	N. J ..	2118	.....	Greensburgh Station, Pennington.	Pennsylvania.....	5.	6 25
611	N. Y..	1593	1288	Carthage, Theresa	Utica and Black River	20.	5 15
612	N. Y..	1546	1236	Sidney Plains, New Berlin..	New York and Oswego Midland	24.	14 15
613	Mo ...	10502	28002	Mineral Point, Potosi.....	Saint Louis and Iron Mountain and Cairo and Fulton.	4	15
614	N. Y..	1592	1287	Oswego, Sodus.....	Lake Ontario Shore	40.	25 20
615	La....	8098	.....	Terrebonne, Houma	Morgan's Louisiana and Texas..	15.	20 15
616	Ala...	6621	.....	Eufaula, Clayton.....	Vicksburgh and Brunswick	22.	5 15
617	Ala...	6619	.....	Chehaw, Tuskegee	Tuskegee	6	15
618	N. Y..	.....	1292	Crawford Junction, Pine Bush.	New York and Oswego Midland	10.	14 15
619	Mass	749	736	Milford, Ashland	Hopkinton.....	11.	6 25
620	Ill	11424	23019	Washington, Dwight	Chicago and Alton	60.	21 25
621	Mass .	638	629	Auburndale, Newton Lower Falls.	Boston and Albany.....	2	15
622	Pa....	2423	.....	Sunbury, Mount Carmel	Northern Central	22	15
623	Mass .	748	662	Milford, Bellingham Junct'n	Providence and Worcester.....	5	25
624	Va....	4403	.....	Owl Run, Warrenton	Washington City, Virginia Midland and Great Southern, (late Orange, Alexandria and Manassas.)	9	25
625	Mass	621	620	Salem, Lawrence.....	Eastern	20	25
626	Cal ..	14877	46015	Elmira, Vacaville	Vaca Valley	4	15
627	Mass	639	630	Natick, Saxonville	Boston and Albany	4	25 15
628	Ill	11909	23046	Jacksonville, Virden.....	Jacksonville, Northwestern and Southeastern.	31.	20 15
629	Md ...	3516	.....	Newtown Junct'n, Newtown	Worcester and Somerset.....	9	15
630	N.J...	2114	.....	Mount Holly, Medford.....	Pennsylvania	6½	25
631	Ill	11424	23019	Varna, Lacon.....	Chicago and Alton.....	10.	60 25
632	N. J ..	2109	.....	Pemberton Junct'n, Hightstown.	Pennsylvania.....	21.	5 25
633	N. J ..	2109	.....	Mount Holly, Burlington....	.....do	7	25
634	Mich .	12528	24027	Niles, South Bend	Michigan Central	12.	20 25
635	N. Y..	1585	1239	Clinton, Rome	New York and Oswego Midland.	13.	25 15

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
2,309	1,290	3,599	2,855	95	18 by 7, f. f., s. l	6	$50 00		582
2,523	1,478	4,001	2,802	93	No apt.; no r. a	12	50 00		583
3,453	2,621	6,074	2,801	93	No r. a	10½*	50 00		584
5,548	5,698	11,246	2,721	90	9.4 by 6.6, f. f., s. l	6	50 00		585
1,623	1,237	2,860	2,706	90	8.2 by 7, f. f., s. l	6	50 00		586
881	1,848	2,729	2,729	90	8.2 by 7, f. f., s. l	6	50 00		587
2,124	1,147	3,271	2,677	89	11 by 7.6, f. f., s. l	12	50 00	In May, 1874	588
2,601	1,715	4,316	2,623	87	No r. a	12	50 00		589
1,780	1,130	2,910	2,556	85	36 cubic feet; no r. a	12	50 00		590
1,944	688	2,632	2,544	85	Locked chest in b. c	6	50 00	In July, 1874	591
2,654	4,406	7,060	2,520	84	30 by 10, f. f	6	50 00		592
2,200	1,438	3,638	2,545	84	No r. a	6	50 00		593
2,676	1,557	4,233	2,534	83	10.6 by 6.11, f. f., s. l	6	50 00	In May, 1874	594
4,972	3,382	8,354	2,496	83	9.6 by 9.6, f. f., s. l	6	50 00		595
1,656	843	2,499	2,499	83	No r. a	15*	50 00		596
1,250	1,739	2,989	2,475	82	6 by 4, no r. a	6	50 00		597
2,774	738	3,512	2,469	82	No apt	6	50 00	Branch; main route $50, (421.)	598
1,439	982	2,421	2,421	80	12 by 10, f. f., d. l	12	50 00		599
4,026	3,078	7,104	2,418	80	18.3 by 7.3, f. f., s. l	6	50 00	In July, 1874	600
2,440	1,486	3,926	2,376	79	b. c.; no r. a	12	50 00	Branch; main route $50, (368.)	601
1,724	1,323	3,047	2,384	79	11 by 9, f. f., s. l	6	50 00	In May, 1874	602
2,289	2,104	4,393	2,212	74	b. c.; no r. a	6	50 00		603
2,360	1,907	4,267	2,132	71	9 by 8, f. f. c., s. l	6	50 00		604
4,799	5,323	10,122	2,138	71	11.5 by 6 9, s. l	6	50 00	In June, 1874	605
3,859	4,220	8,079	2,060	68	12.6 by 8.6, f. f., s. l	6	50 00		606
949	1,111	2,060	2,060	68	No r. a	9*	50 00		607
1,286	742	2,028	2,028	67	No apt	12	50 00		608
2,716	4,426	7,142	1,970	65	7.6 by 7, f. f., s.l	6	50 00		609
1,173	752	1,925	1,925	64	No r. a	12	50 00		610
2,464	1,625	4,089	1,867	62	do	11*	50 00		611
2,707	1,944	4,651	1,807	60	8.9 by 6.4, f. f., s. l	6	50 00	In July, 1874	612
1,030	788	1,818	1,818	60	No r. a	6	50 00	Branch; main route $100, (167.)	613
4,875	2,348	7,223	1,751	58	7 by 6, f. f., s l	6	50 00		614
1,164	693	1,857	1,709	56	No apt.; s. l	6	50 00		615
2,036	1,340	3,376	1,688	56	No r. a	6	50 00		616
1,041	575	1,666	1,666	55	do	12	50 00		617
1,592	805	2,397	1,617	53	No apt	6	50 00	In July, 1874	618
1,470	2,194	3,664	1,579	52		6	50 00		619
2,894	4,063	6,957	1,586	52	17 by 10, s. l	6	50 00	Main route; branch $50, (631.) In May, 1874.	620
862	712	1,574	1,574	52	No apt	12	50 00		621
1,851	1,086	2,937	1,525	50	8.10 by 5.7, f. f., s. l	10*	50 00		622
672	796	1,468	1,468	49	No r. a	12	50 00		623
966	668	1,634	1,444	48	Locked room in b. c.; no r. a.	6	50 00	Branch; main route $225, (25.)	624
3,527	2,589	6,116	1,459	48	No r. a	8½*	50 00		625
888	497	1,385	1,385	46	No apt.; no r. a	12	50 00		626
860	488	1,348	1,348	44	No apt	12	50 00		627
1,900	1,416	3,316	1,304	43	5.6 by 3.3, f. f., s. l	6	50 00	In May, 1874	628
767	364	1,131	1,131	37	No apt	6	50 00	In August, 1874	629
785	894	1,679	1,278	42	8 by 6.6, fixtures; no r. a	12	50 00		630
626	495	1,121	1,121	37	17 by 10, s. l	6	50 00	Branch; main route $50, (620.) In May, 1874.	631
			1,044	35	8 by 6.6, fixtures, s. l	6	50 00	Part; residue $75, (262.)	632
662	399	1,061	1,061	35	8 by 6.6, fixtures	12	50 00	Branch; main route $75, (262.)	633
610	778	1,388	1,042	35	No r. a	6	50 00		634
873	586	1,459	1,060	35	18.3 by 7.3; no r. a	6	50 00	In July, 1874	635

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
636	Pa....	2437	.....	Duncansville, Newry	Pennsylvania	3	12
637	Pa....	2437	.....	Martinsburgh, Henrietta....	.....do	6.7	15
638	N. J ..	2131	.....	Kinkora Junction, New Lisbon.	.....do	14.41	25
639	N. Y..	1541	1277	Clove Branch Junction, Sylvan Lake.	Dutchess and Columbia	4.5	25
640	Mass .	622	621	Georgetown, Haverhill.....	Boston and Maine.....	6¼	30
641	Va....	4411	.....	Petersburgh, City Point	Atlantic, Mississippi and Ohio...	12	
642	Ark ..	7525a	.....	Chicot, Pine Bluff.....	Texas, Mississippi River and Northwestern. (late Little Rock, Pine Bluff and New Orleans.)	72.75	12
643	Ind ...	12015	22015	Fairland, Martinsville	Cincinnati and Martinsville.....	32¼	1
644	Ark ..	7502	.....	Helena, Clarendon	Arkansas Central.....	48.02	30
645	N. Y..	1518	1280	Plattsburgh, Au Sable Forks	Whitehall and Plattsburgh	23	12
646	Ohio ..	9010	.....	Oneida Mills, Carrollton	Carrollton and Oneida	12	
647	Ill	11917	23037	Vincennes, Cairo.....	Cairo and Vincennes	156¼	21
648	Ind ...	12020	22020	Richmond, Fort Wayne.....	Cincinnati, Richmond and Fort Wayne.	91.5	22
649	Ind ...	12027	22027	Rockville, Logansport	Logansport, Crawfordsville and Southwestern.	92.1	20
650	Ill	11911	23047	Chester, Tamaroa.....	Chester and Tamaroa Coal and Railroad Company.	43	15
651	Pa....	2428	.....	Harrisburgh, Auburn.....	Philadelphia and Reading.....	58.3	26
652	Iowa..	11012b	27002	Cedar Rapids, Postville....	Burlington, Cedar Rapids and Minnesota.	99.2	14
653	Iowa..	11003 4th p't	27009	Villisca, Clarinda.....	Burlington and Missouri River ..	16	11
654	Pa....	2411	.....	Penn Haven Junction, Mount Carmel.	Lehigh Valley	50	20
655	Tenn .	10004	19004	Wartrace Depot, Shelbyville	Nashville, Chattanooga and Saint Louis.	8	15
656	Ill	11900	23032	McLeansborough, Shawneetown.	Saint Louis and Southeastern, Consolidated.	41¼	12
657	Ill ...	11427	23024	Pekin, Decatur	Toledo, Wabash and Western....	68.46	22
658	Ill	11919	23014	Rock Falls, Shabbona	Chicago, Burlington and Quincy	47.21	22
659	Wis ..	13010	25007	Nepeuskun, Winneconne ...	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	16.25	24
660	S. C ..	5610	.....	Alston, Spartanburgh C. H..	Spartanburgh and Union.....	68¼	15
661	Pa....	2455	.....	Wilmington, Birdsborough..	Wilmington and Reading	63.6	15
662	Iowa..	11005b	27016	Washington, Sigourney.....	Chicago, Rock Island and Pacific	29	14
663	Ill	11902	23013	Mendota, Clinton.....	Chicago, Burlington and Quincy	64.19	22
664	Mich .	12325	24024	Ypsilanti, Bankers.....	Detroit, Hillsdale and Indiana..	63.40	22
665	Tenn .	10005	19005	Fayetteville, Decherd.....	Southern Railway Security Co...	40	14
666	Pa....	2457	.....	Perkiomen Junction, Green Lane.	Philadelphia and Reading.....	17.92	22
667	Ill	11421	23039	Carbondale, Grand Tower...	Grand Tower Mining, Manufacturing, and Transportation Co.	25	17
668	Pa....	2468	.....	Lewisburgh, Mifflinburgh ..	Pennsylvania	10.7	14
669	Pa....	2462	.....	Schuylkill, Glen Carbon	Philadelphia and Reading	13.2	15
670	Mich .	12949	24030	East Saginaw, Saint Louis..	Saginaw Valley and Saint Louis	35.56	22
671	Ga....	6015	.....	Cuthbert, Fort Gaines	Southwestern	24	12
672	Wis ..	13020	25018	Manitowoc, Appleton.....	Milwaukee, Lake Shore and Western.	44¼	15
673	Pa....	2458	.....	Pottstown, Colebrookdale...	Philadelphia and Reading.....	13.05	12
674	Mich .	12954	24033	Ionia, Stanton	Detroit, Lansing and Lake Michigan.	25.3	20
675	Ohio .	9040	.....	Logan, New Straitsville	Columbus and Hocking Valley...	13.2	20
676	Pa....	2469	.....	Lewistown Junc., Sunbury .	Pennsylvania	45	30
677	Ill	11914	23048	Paris, Decatur	Paris and Decatur	76.63	22
678	Wis ..	13018	25017	Stevens' Point, Colby.....	Wisconsin Central, operated by Phillips & Colby Construction Company.	48.56	20
679	Pa....	2470	.....	Union City, Titusville	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	14.1	12
680	Tenn .	10015	19014	Memphis, Covington.....	Paducah and Memphis.....	28.31	12

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs*	*Feet and inches.*				
936	624	1,560	1,034	34	b. c.; no r. a	6	$50 00	Branch; main route $50, (486.)	636
487	452	939	939	31	do	6	50 00	Branch; main route $50, (486.)	637
1,095	1,048	2,143	939	31	No apt	12	50 00		638
411	197	608	608	20	No r. a	6	50 00	Branch; main route $50, (571.)	639
300	311	611	611	20	b. c.; no r. a	12	50 00		640
308	184	492	492	16	No r. a	6	50 00		641
4,079	4,431	8,510	8,060	268	5 by 4.6, ½-line	3	45 00		642
4,951	3,173	8,124	3,029	100	11.3 by 6.10, f. f., s. l.	6	45 00	In June, 1874	643
1,770	1,275	3,045	1,930	64	10 by 8, f. f., s. l	6	45 00		644
3,585	1,960	5,545	4,197	140	No apt.; no r. a	6	43 47		645
1,530	1,020	2,550	2,550	85			41 66		646
14,016	13,848	27,864	14,027	467	10 by 6, f. f., s. l	6	40 00		647
8,349	6,822	15,171	6,405	213	14 by 7, s. l	6	40 00		648
6,677	8,755	15,432	5,782	192	10 by 8, f. f., s. l	6	40 00		649
3,745	5,441	9,187	5,552	185	9.5 by 6.6, f. f., s. l	6	40 00	In May, 1874	650
4,668	5,418	10,086	5,375	179	7.9 by 3.7, f. f., s. l	7½*	40 00		651
6,299	6,310	12,609	4,886	162	9.11 by 7.7, f. f., s. l	6	40 00		652
2,697	1,898	4,585	4,585	152	No r. a	12	40 00		653
6,338	2,807	9,145	4,284	142	10 by 7, f. f., s. l	9½*	40 00		654
1,404	2,874	4,278	4,278	142	No r. a	6	40 00	Branch; main route $300, (38;) $150, (91.)	655
4,527	3,412	7,939	4,079	135	12 by 6.6, f. f., s. l	6	40 00	Branch; main route $90, (195.)	656
5,358	5,646	11,004	4,035	134	12 by —, f. f., s. l	6	40 00		657
3,608	3,382	6,390	3,921	131	7 by 6.6, f. f., s. l	6	40 00		658
2,957	3,084	6,041	3,907	130	No r. a	6	40 00		659
4,721	2,883	7,604	3,576	119	7.1 by 6.5, f. f., s. l	6	40 00		660
5,919	4,536	10,455	3,362	112	7.6 by 7, f. f., s. l	6	40 00		661
3,351	1,587	4,940	3,273	108	8 by 6.4, f. f., s. l	6	40 00		662
4,508	2,806	7,314	3,079	103	9 by 7, f. f., s. l	6	40 00		663
5,811	3,275	9,086	2,971	99	7.6 by 5.6, f. f., s. l	6	40 00		664
2,754	2,497	5,251	2,955	98	8.3 by 8, f. f., s. l	6	40 00	In June, 1874	665
3,435	2,061	5,496	2,884	96	b. c.; no r. a	6½*	40 00		666
2,585	1,795	4,380	2,878	95	No apt	9*	40 00		667
1,922	1,151	3,079	2,689	89	No r. a	6	40 00		668
2,405	1,765	4,173	2,532	84	do	6	40 00		669
2,072	1,171	3,243	2,519	81	No apt.; no r. a	9*	40 00		670
1,825	886	2,711	2,405	80	No apt	6	40 00	Branch; main route $75, (264.)	671
2,175	1,864	4,039	2,370	78	do	6	40 00	Branch; main route $67, (290.) In June, 1874.	672
2,275	1,579	3,854	2,230	74	No r. a	6	40 00		673
1,692	1,021	2,713	2,111	70	No apt.; no r. a	6	40 00		674
1,591	1,090	2,681	2,087	69	14 by 10, f. f., s. l	12	40 00	Branch; main route $75, (240.)	675
4,609	2,889	7,498	2,044	68	10.9 by 8, f. f., s. l	6	40 00		676
2,964	3,363	6,327	1,992	66	11.6 by 6.6, f. f c., s. l	6	40 00		677
....	.....	.....	1,926	63	14.2 by 7.10, f. f.; r. a. 63 m.; apt. through whole length of route.	6	40 00	Part; residue $70, (304.) In May, 1874.	678
1,639	2,233	3,872	1,924	63	8 by 7, f. f., s. l	6	40 00		679
1,737	1,494	3,231	1,882	62	4 by 3.6, s. l	6	40 00		680

E.—*Table showing the weight of the mails, the speed with which they*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
681	Ill....	11908	23045	Carbondale, Marion.....	Carbondale and Shawneetown....	18	1
682	N. C..	5213	.....	Charlotte, Statesville.....	Atlantic, Tennessee and Ohio....	48.40	15
683	Ga....	6143	.....	Barnesville, Thomaston.....	Macon and Western	17½	12
684	Ill....	11906	23044	Mattoon, Henry City.....	Chicago and Illinois Southern, consolidated.	31.66	15
685	Pa....	2424	.....	Alton, Carrollton	Erie	25.5	30
686	Del....	3405	.....	Wilmington, Landenbergh..	Wilmington and Western.....	19.53	10
687	Ind....	12011	23011	Cambridge City, Columbus..	Jeffersonville, Madison and Indianapolis.	65	22
688	Pa....	2471	.....	Towanda, Barclay	Erie, (late Towanda Coal Co).....	12	30
689	Iowa..	11012*d*	27003	Vinton, Traer	Burlington, Cedar Rapids and Minnesota.	24.77	12½
690	Pa....	2488	.....	Pomeroy, Delaware City....	Pennsylvania, (late Pennsylvania and Delaware.)	38.58	13
691	N. Y..	1045	1209	Goshen, Montgomery	Erie	10.25	30
692	Mass .	655	635	South Abington, Bridgewater.	Old Colony and Newport.....	7.75	25
693	S. C....	5611	.....	Newberry C. H., Laurens C. H.	Joseph Crews, (contractor)	31.52	4
694	Ind....	12029	23039	Terre Haute, Martz.....	Cincinnati and Terre Haute	26.15	19
695	Ky	9609	20006	Junction, Bardstown.....	Louisville and Nashville.....	17.3	15
696	Mo	10515*a*	28014	Hannibal, Sedalia.....	Missouri, Kansas and Texas	142.88	25
697	Ill....	11434	23042	Chicago, Danville.....	Chicago, Danville and Vincennes.	108	20
698	Iowa..	11019	27008	Viele, Unionville	Burlington and Southwestern....	104.75	20
699	N. H..	342	262	Hookset, Pittsfield	Suncook Valley.....	20	20
700	Ky	9842	20015	Owensborough, Owensborough Junction.	Evansville, Owensborough and Nashville.	36.13	15
701	Mich .	12527	24026	Grand Rapids, Newaygo	Grand Rapids, Newaygo and Lake Shore.	36.40	18
702	Iowa .	11015	27024	Clinton, Anamosa.....	Chicago and Northwestern.....	74.1	20
703	N. J ..	2133	.....	Bridgeton, Port Norris.....	Bridgeton and Port Norris.....	20.24	20
704	Ill....	11918	23050	Paris, Danville.....	Paris and Danville.....	36	18
705	Ala....	6616	.....	Opelika, Dadeville	Savannah and Memphis.....	38.58	16
706	Pa....	2460	.....	Lebanon, Tower City	Philadelphia and Reading.....	43.1	15
707	Tenn .	10014	19013	Tracy City, Cowan	Tennessee Coal and Railroad Co..	23	12
708	W. Va	4189	.....	Laurel Junction, Volcano...	Laurel Fork and Sand Hill.....	8	12
709	Conn .	945	910	Branchville, Ridgefield	Danbury and Norwalk.....	4	
710	Ga....	6231	.....	Columbus, Hamilton.....	North and South.....	23.51	15
711	Ill....	11430	23006	Sagetown, Keithsburgh.....	Rockford, Rock Island & St. Louis.	18	20
712	Mich .	12953	24032	Muskegon, Big Rapids.....	Chicago and Michigan Lake Shore	56.64	25
713	Mich .	12948	24014	Flint, Otter Lake	Flint and Pere Marquette	19	11
714	Tenn .	10095	19015	Jasper, Bridgeport	Nashville and Chattanooga	12	20
715	Iowa	11012*a*	27004	Muscatine, Lone Tree.....	Burlington, Cedar Rapids and Minnesota.	23.23	15
716	Pa....	2459	.....	Oleopolis, Pit Hole.....	Pit Hole Valley	7	15
717	Ga....	6144	.....	Carteraville, Rock Mart.....	Cherokee	22	15
718	La....	8004	.....	Clinton, Port Hudson	Clinton and Port Hudson	23	15
719	Wis...	13014	25014	Stillwater Junction, Stillwater.	West Wisconsin.....	34	25
720	Pa....	2477	.....	Conshohocken, Flourtown ..	Philadelphia and Reading.....	7½	15
721	Va....	4701	.....	Glade Spring, Saltville	Atlantic, Mississippi and Ohio ...	94	20
722	Fla ...	6402	.....	Tallahassee, Saint Mark's...	Jacksonville, Pensacola & Mobile	21.75	20
723	N. H ..	.....	351	Wolfborough Junction, Wolfborough.	Eastern.....	12.11	24
724	Va....	4408	.....	Richmond, West Point.....	Richmond and York River	40	20
725	Tenn .	10012	19012	Morristown, Riverside.....	Cincinnati, Cumberland Gap and Charleston.	39.8	11
726	Ill....	11413	23022	Joliet, Lake Station.....	Michigan Central	45	25
727	Pa ..	2407	....	Bridgeport, Downingtown..	Philadelphia and Reading.....	21.48	15
728	N. Y..	1567	1210	Goshen, Pine Island	Erie, (late Goshen & Deckertown)	11	20
729	Ky	9824	20014	Grayson, Greenup C. H.....	Eastern Kentucky.....	23½	15

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Feet and inches.*				
1,872	1,015	2,887	1,805	61	13 by 9, s. l.	6	$40 00		681
2,247	3,204	5,451	1,703	56	9 by 5, f. f., s. l	6	40 00		682
1,041	776	1,817	1,591	53	4 by 3; no r. a	6	40 00		683
2,069	1,506	3,575	1,516	51	12 by 6. 6, f. f., s. l	6	40 00		684
1,230	1,530	2,760	1,531	51	b. c.; no r. a	6	40 00		685
1,116	685	1,801	1,535	51	7. 5 by 6. 10, f. f., s. l	6	40 00		686
4,485	4,109	8,594	1,517	50	10. 9 by 6, f. f., s. l	6	40 00		687
789	490	1,279	1,279	42	b. c.; no r. a	6	40 00		688
954	637	1,591	1,240	41	10. 4½ by 7. 7, f. f.; no r. a	6	40 00		689
1,363	1,264	2,627	1,170	38	No apt.; no r. a	6	40 00		690
4,611	1,851	6,462	6,127	204	7 by 6, f. f. c., s. l	6	39 02		691
1,871	1,094	2,965	2,162	72	b. c.; no r. a	6	38 40		692
2,626	2,321	4,947	4,417	149		3	38 07		693
2,249	1,766	4,015	1,580	52	r. a. in b. c.; s. l	6	35 00		694
3,051	2,101	5,152	3,821	127	No r. a	6	31 21		695
85,040	31,427	116,467	103,643	3,454	r. p. o., 51.2 by 9.10, f. f., s. l.	7	30 00	In June, 1874	696
11,273	6,344	17,617	7,451	248	12 by 7, f. f., s. l	6	30 00	Distance counted from Dalton.	697
11,817	6,219	18,036	7,039	234	12 by 7, fixtures, s. l	6	30 00		698
4,816	3,107	7,923	5,660	188	4.10 by 2.10, f. f., d. l. 8 miles, 1½ lines 4 miles.	11*	30 00		699
2,634	4,824	7,458	4,752	158	9 by 6, f. f., s. l	6	30 00	In June, 1874	700
4,316	2,591	6,907	3,956	132	12 by 7, f. f., s. l	12	30 00		701
6,593	3,533	10,126	3,252	109	9.6 by 9.6, f. f., s. l	6	30 00		702
2,570	1,655	4,225	2,519	83	8.6 by 7, f. f.; no r. a	12	30 00		703
1,423	2,363	3,786	2,025	67	10 by 5, f. f., s. l	6	30 00		704
1,718	1,148	2,866	1,995	66	9 by 5, f. f., s. l	6	30 00		705
5,411	3,538	8,949	1,897	63	6.7 by 6.2. 6.10 by 6, f. f., s. l.	7½*	30 00		706
863	1,411	2,274	1,906	63	No apt	6	30 00	In May 1874	707
1,072	749	1,821	1,821	60	2.6 by 2.6; no r. a	18	30 00		708
1,102	495	1,597	1,597	53	No r. a	12	30 00	Branch; main route $85.11, (201.)	709
976	554	1,530	1,426	47	3.6 by 2.6; no r. a	6	30 00		710
1,649	799	2,448	1,364	45	b. c.; no r. a	12	30 00		711
2,539	2,032	4,571	2,584	43	12 by 10, s. l	6	30 00	60 days, in Sept., 1873, and Jan. 1874.	712
1,086	787	1,873	1,285	43	r. a., s. l.; no distribution	6	30 00		713
644	616	1,260	1,260	42	No r. a	6	30 00		714
1,315	1,219	2,534	1,254	41	10.4¾ by 7.7, f. f., s. l	6	30 00		715
753	496	1,249	1,249	41	11 by 6.10, f. f.; no r. a	6	30 00		716
679	315	994	994	37	8 by 3, locked; no r. a	6	30 00	27 days	717
582	395	977	977	32	No apt	3	30 00	In May, 1874	718
596	220	816	816	27	b. c.; no r. a	6	30 00	Branch; main route $50, (362.)	719
854	449	1,303	746	24	No r. a	6	30 00		720
408	232	640	640	21	do	6	30 00		721
236	174	410	410	13	do	3	30 00	Branch; main route $75, (281.)	722
275	160	435	335	11	do	12	30 00		723
3,275	1,529	4,804	3,358	112	10.7 by 8.11, f. f.; s. l	6¾*	25 00		724
2,897	2,031	4,928	2,397	80	12 by 7, f. f., s. l	6	25 00		725
1,823	1,599	3,422	1,121	36	r. a. in b. c., s. l	6	25 00		726
1,243	645	1,888	1,037	34	No r. a	6	25 00		727
1,639	961	2,600	1,954	65	7 by 6, f. f. c., s. l	6	22 18		728
3,787	480	4,267	4,267	142	3 by 2.6, s. l	6	21 05		729

JOHN L. ROUTT.
Second Assistant Postmaster-General.

Index to Table E.

Title.	Order.	Number of route.	New number of route.
Alabama and Chattanooga	435	6615	.....
Allegheny Valley	202	2442	.....
Allegheny Valley. (See Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh.)			
Androscoggin	244	19	34
Arkansas Central	644	7502	.....
Atchison and Nebraska	312	14212	33009
Atchison, Topeka and Santa Fé	183	14183	33007
Do	185	14183	33007
Athol and Enfield. (See Springfield, Athol and Northeastern.)			
Atlanta and Richmond Air-Line	287	6017	.....
Atlanta and West Point	49	6003	.....
Atlantic and North Carolina	350	5005	.....
Atlantic and Great Western	173	9006	.....
Do	180	9006	.....
Do	214	9038	.....
Do	271	2444	.....
Do	330	9006	.....
Do	574	9041	.....
Atlantic, Mississippi and Ohio	28	4414	.....
Do	389	4413	.....
Do	396	4412	.....
Do	641	4411	.....
Do	721	4701	.....
Atlantic, Tennessee and Ohio	682	5213	.....
Baltimore and Ohio	18	3504	.....
Do	50	4102	.....
Do	361	3518	.....
Baltimore and Potomac	153	3514	.....
Do	541	3515	.....
Bangor and Piscataquis. (See Consolidated European and North American.)			
Boston and Albany	2	605	605
Do	6	605	605
Do	13	605	605
Do	315	721	650
Do	415	641	632
Do	580	733	655
Do	621	638	629
Do	627	639	630
Boston and Lowell and Nashua and Lowell	75	603	603
Do	337	278	257
Do	476	636	627
Do	551	631	624
Boston and Lowell and Nashua and Lowell, (late Lexington and Arlington)	563	632	625
Boston and Lowell and Nashua and Lowell	590	629	623
Boston and Maine	82	602	602
Do	89	602 221	602 221
Do	135	221	221
Do	452	602	602
Do	475	308	259
Do	519	728	652
Do	538	610	610
Do	640	622	621
Boston and Providence	46	608	608
Do	504	617	616
Boston and Providence, (late Stoughton Branch)	608	650	633
Boston, Barre and Gardner	364	745	660
Boston, Clinton and Fitchburgh	245	688	644
Do	247	640	631
Do	418	735	656
Do	457	742	659
Boston, Concord and Montreal	150	253	252
Do	363	331	261
Boston, Hartford and Erie	196	607	607
Do	241	925	901
Do	321	606	606

Title.	Order.	Number of route.	New number of route.
Boston, Hartford and Erie	333	607	975
Bridgeton and Port Norris	703	2133	.....
Brunswick and Chillicothe and Saint Louis, Council Bluffs and Omaha	547	10514	28011
Buffalo and Jamestown	513	.....	1259
Buffalo, Corry and Pittsburgh. (See Oil Creek and Alleghany River and Buffalo, Corry and Pittsburgh.)			
Buffalo, New York and Philadelphia	411	1309	1209
Burlington and Missouri River	40	11003	27005
Do	60	11003	27005
Do	423	11018	27017
Do	431	11003	27005
Do	573	11003	27005
Do	653	11003 3d p't 11003 4th p't	27009
Burlington and Missouri River in Nebraska	369	14479	34014
Do	386	14451	34012
Do	515	14497	34017
Burlington and Southwestern	698	11019	27006
Burlington, Cedar Rapids and Minnesota	342	11012	27011
Do	652	11012a	27002
Do	689	11012d	27003
Do	715	11012a	27004
Cairo and Vincennes	647	11917	28015
California and Oregon	225	14703	40011
California Northern	511	14709	40013
California Pacific	99	14707	40010
Do	244	14707	40010
Do	505	14706	40009
Cape Cod	146	663	625
Do	162	670	630
Cape Cod. (See Old Colony and Newport.)			
Carbondale and Shawneetown	641	11909	28010
Carrollton and Oneida	646	9010	.....
Cayuga Lake	484	15e9	1254
Cazenovia and Canastota. (See Cazenovia, Canastota and De Ruyter.)			
Cazenovia, Canastota and De Ruyter, (late Cazenovia and Canastota)	523	1562	1272
Central of Iowa	464	11015	27013
Central Pacific	21	14701	40011
Do	373	14676	40011
Central Railroad and Banking Company	122	6004	.....
Do	136	6009	.....
Do	586	6013	.....
Do	587	6014	.....
Central Vermont, (late Rutland and Burlington)	47	482	406
Do	48	482	406
Central Vermont, (late Vermont Central)	58	461	403
Central Vermont, (late Vermont Central and Vermont and Canada)	63	412	401
Central Vermont, (late Vermont Valley)	101	4e7	407
Central Vermont, (late Sullivan)	102	4e1	401
Central Vermont, (late Vermont and Massachusetts)	140	680	704
Central Vermont, (late Rutland and Burlington)	144	482	406
Central Vermont, (late Vermont Central)	152	936	802
Central Vermont, (late Vermont Central & Vermont & Canada)	154	15e2	1252

Index to Table E—Continued.

Title.	Order.	Number of route.	New number of route.
Central Vermont, (late Vermont and Canada)	176	508	408
Central Vermont, (late Ogdensburgh and Lake Champlain)	193	1022	1242
Central Vermont, (late New London Northern)	226	696	647
Central Vermont, (late Vermont Central)	228	926	902
Do	229	926	902
Central Vermont, (late Harlem Extension)	302	1524	1279
Do	326	1524	1279
Central Vermont, (late Vermont Central and Vermont and Canada)	377	520	409
Champlain and Saint Lawrence	126	1023	1258
Chenango and Allegheny	409	2452	.....
Cherokee	717	6144	.....
Chesapeake and Ohio	177	4406	.....
Do	392	4293	.....
Cheshire and Ashuelot	125	689	645
Do	403	703	649
Chester and Tamaroa Coal and Railroad Company	650	11911	23047
Chicago and Alton	41	11406	23017
Do	159	11416	23018
Do	359	10523a	28022
Do	517	10522a	28021
Do	620	11424	23019
Do	631	11424	23019
Chicago and Illinois Southern, Consolidated	684	11906	23044
Chicago and Lake Huron, (late Peninsular)	492	12520	24020
Do	516	12522	24022
Do	530	12522	24022
Chicago and Michigan Lake Shore	216	12521	24021
Do	488	12521	24021
Do	712	12953	24032
Chicago and Northwestern	34	11403	23003
Do	35	11403	23003
Do	36	11403	23003
Do	61	13001	25009
Do	62	11401	23001
Do	78	11402	23002
Do	184	13013	25010
Do	209	12950	24031
Do	242	12846	24029
Do	356	13017	25012
Do	515	110175	27013
Do	595	11408	23004
Do	702	11015	27024
Chicago and Superior, (late Madison and Portage)	494	13016	25023
Chicago, Burlington and Quincy	21	11405	23007
Do	26	11405	23007
Do	67	11417	23010
Do	219	11002	27011
Do	292	11415	23009
Do	293	11415	23009
Do	382	11432	23011
Do	401	11409	23008
Do	405	11901	23012
Do	408	11409	23008
Do	456	11405	23007
Do	557	11405	23007
Do	658	11919	23014
Do	663	11902	23013
Chicago, Cincinnati and Louisville	437	12014	22014
Chicago, Danville and Vincennes	697	11434	23042
Chicago, Dubuque and Minnesota	344	11016	27012
Do	348	11016	27012
Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul)	39	13513	26013
Do	54	11921	23035
Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul)	76	12005	25002
Do	93	13504	25001
Do	98	13504	21009
Do	237	13006	25003
Do	279	13009	25006
Do	463	13007	25004
Do	479	13304	25008
Do	565	13514	26010
Do	572	13841	26011
Do	659	13010	25007
Chicago, Pekin and Southwestern	442	11920	23051
Chicago, Rock Island and Pacific	32	11404	23015
Do	71	11105	27014
Do	238	11412	23016
Do	309	11004	27017
Do	449	11005a	27015
Do	529	11005a	27015
Do	662	11005b	27016
Cincinnati and Martinsville	643	12015	22015
Cincinnati and Muskingum	263	9033	.....
Cincinnati and Terre Haute	694	12029	22029
Cincinnati, Cumberland Gapand Charleston	725	10012	19012
Cincinnati, Hamilton and Dayton	59	9030	.....
Do	87	9030	.....
Do	134	9029	.....
Cincinnati, La Fayette and Chicago	69	12028	22028
Cincinnati, Richmond and Fort Wayne	648	12020	22020
Cincinnati, Wabash and Michigan	605	12021	22021
Cleveland and Pittsburgh	88	9007	.....
Do	121	9003	.....
Do	495	9009	.....
Cleveland, Columbus, Cincinnati and Indianapolis	29	9046	.....
Do	43	9018	.....
Do	117	9015	.....
Cleveland, Mount Vernon and Delaware	340	9005	.....
Clinton and Port Hudson	718	8004	.....
Colorado Central	421	17038	38004
Do	598	17038	38004
Columbus and Hocking Valley	240	9040	.....
Do	675	9040	.....
Columbus and Xenia	12	9016	.....
Columbus, Chicago and Indiana Central	42	9017	.....
Concord and Claremont	336	255	254
Concord	72	251	251
Do	416	256	253
Do	567	269	256
Connecticut and Passumpsic Rivers. (See Connecticut and Passumpsic Rivers and Massawippi Valley.)			
Connecticut and Passumpsic Rivers and Massawippi Valley, (late Connecticut and Passumpsic Rivers)	141	452	402
Connecticut River	73	702	648
Connecticut Valley	412	976	914
Connecticut Western	570	980	916
Consolidated European and North American	107	181	9
Consolidated European and North American, (late Bangor and Piscataquis)	433	188	10
Continental Improvement Company	351	12955	24034
Contocook River	548	299	258
Cooperstown and Susquehanna Valley	299	1525	1278

Index to Table E—Continued.

Title.	Order.	Number of route.	New number of route.
Crews, Joseph, (contractor)	693	5611	.....
Cumberland and Pennsylvania	561	3512	.....
Cumberland Valley	560	2474	.....
Danbury and Norwalk	201	945	910
Do	489	945	910
Do	709	945	910
Dayton and Michigan	110	9027	.....
Dayton and Union	323	9026	.....
Delaware and Hudson Canal	171	1013	1245
Do	490	2418	.....
Do	512	1544	1244
Delaware, Lackawanna and Western	199	1040	1230
Do	217	2419	.....
Do	372	1228	1229
Do	420	1405	1228
Do	445	1545	1231
Denver and Boulder Valley	378	17051	38003
Denver and Rio Grande	388	17064	38001
Detroit and Bay City	289	12529a	24013
Detroit and Milwaukee	165	12507	24006
Detroit, Eel River and Illinois	354	12026	22026
Detroit, Hillsdale and Indiana	664	12525	24024
Detroit, Lansing and Lake Michigan	269	12517	24017
Do	674	12954	24033
Dorchester and Delaware	527	3509	.....
Dubuque and Southwestern	331	11006	27020
Dunkirk, Allegheny Valley and Pittsburgh	485	1580	1265
Dunkirk and Fredonia	130	1338a	1250
Dutchess and Columbia	571	1541	1277
Do	639	1541	1277
Eastern	23	601	601
Eastern, (late Portland, Saco and Portsmouth)	49	114	124
Eastern	300	732	654
Do	390	619	618
Do	581	616	615
Do	589	727	651
Do	596	620	619
Do	625	621	620
Do	723	.....	351
Eastern Kentucky	729	9824	20014
Eastern Shore	298	3402	.....
East Tennessee, Virginia and Georgia.	27	10001 10002	19002
Do	157	10002	19002
Edgefield and Kentucky. (See Saint Louis and Southeastern Consolidated.)			
Erie	1	1001	1201
Do	11	1038	1208
Do	14	1035	1207
Do	248	1032	1205
Do	273	2409	.....
Do	335	1033	1206
Do	393	1010	1204
Do	395	1574	1203
Erie, (late Hackensack and New York)	450	2119	.....
Erie	462	2128	.....
Do	539	1010	1204
Do	550	1009	1202
Do	603	2120	.....
Do	604	2465	.....
Do	685	2424	.....
Erie, (late Towanda Coal Company)	688	2471	.....
Erie	691	1045	1209
Erie, (late Goshen & Deckertown)	728	1567	1210
Evansville and Crawfordsville	203	12012	22012
Evansville and Crawfordsville. (See Logansport, Crawfordsville and Southwestern.)			
Evansville, Owensborough and Nashville, (late Owensborough and Russellville)	700	9842	20015
Fall Brook Coal Company	658	9484	.....
Fall River, Warren and Providence	459	831	804
Fitchburgh	52	604	604
Do	402	637	636
Do	583	635	636
Flint and Père Marquette	227	12515	24015
Do	425	12516	24016
Do	713	12948	24014
Fonda, Johnstown and Gloversville	288	1561	1273
Fort Wayne, Jackson and Saginaw	426	12509	24009
Fort Wayne, Muncie and Cincinnati	424	12019	22019
Freehold and Jamesburgh Agricultural	291	2115	.....
Gilman, Clinton and Springfield	542	11907	23034
Goshen and Deckertown. (See Erie.)			
Grand Gulf and Port Gibson	285	7006	.....
Grand Rapids and Indiana	524	12518	24018
Grand Rapids, Newaygo and Lake Shore	701	12527	24025
Grand Tower Mining, Manufacturing and Transportation Company	667	11421	23024
Grand Trunk	111	116	6
Do	148	116	6
Do	149	116	6
Do	179	1250a	2407
Green Bay and Minnesota	478	13395	25015
Hackensack and New York. (See Erie.)			
Hannibal and Saint Joseph	51	10505	20017
Do	65	10506	20018
Do	105	10510	20022
Hanover Branch	508	2433	.....
Harlem Extension. (See Central Vermont.)			
Hartford, Providence and Fishkill	182	955	913
Hartford, Providence and Fishkill, (late Rockville)	498	973	913
Hopkinton	619	749	749
Housatonic	215	943	943
Do	221	943	943
Do	222	943	943
Huntington and Broad Top	318	2435	.....
Illinois Central	127	11407	23029
Do	151	11418	23031
Do	163	11007	23032
Do	399	11010	23033
Indianapolis and Vincennes, operated by Pennsylvania Company	510	12001	22001
Indianapolis, Bloomington and Western	192	12017	22017
Indianapolis, Cincinnati and La Fayette	68	12003	22003
Do	70	12005	22005
Indianapolis, Peru and Chicago	94	12004	22004
Do	96	12004	22004
Do	252	12004	22004
Do	543	12025	22025
Iowa Eastern	582	11020a	23020
Ithaca and Athens	554	1579	1267
Jackson, Lansing and Saginaw. (See Michigan Central.)			
Jacksonville, Northwestern and Southeastern	628	11909	23040

Index to Table E Continued.

Title.	Order.	Number of route.	New number of route.
Jacksonville, Pensacola and Mobile	281	6402	.....
Do	722	6402	.....
Jeffersonville, Madison and Indianapolis	92	12007	22007
Do	468	12006	22006
Do	687	12011	22011
Junction and Breakwater	559	3404	.....
Junction and Fort Kearney	313	14314	33012
Kansas Central	528	14235	33010
Kansas City, Saint Joseph, and Council Bluffs	104	10506	28006
Do	413	10506	28006
Kansas Pacific	77	14001	33001
Do	205	14001	33001
Kentucky Central	170	9606	20002
Keokuk and Des Moines	246	11001	27019
Knox and Lincoln	206	204	13
Lackawanna and Bloomsburgh	234	2417	.....
Lake Erie and Louisville	473	9034	.....
Lake Erie, Evansville and Southeastern	591	12030a	22031
Lake Ontario Shore	614	1592	1287
Lake Shore and Michigan Southern	8	1039	1241
Do	143	12502	24001
Do	223	12501½	9049
Do	261	12503	24002
Do	305	12512	24011
Do	355	9003	.....
Do	376	12505	24004
Do	461	12529	24028
Do	477	12504	24003
Do	534	2446	.....
Lake Shore and Tuscarawas Valley	566	9045	.....
Lake Superior and Mississippi	380	13508	26006
Do	497	13512	26008
Do	592	13837	26007
Laurel Fork and Sand Hill	708	4189	.....
Lawrence and Southwestern	316	14311	33011
Lehigh Valley	16	2479	.....
Do	166	2410	.....
Do	257	2416	.....
Do	303	2412	.....
Do	654	2411	.....
Lexington and Arlington. (See Boston and Lowell and Nashua and Lowell.)	.....	.....	.....
Little Miami	30	9031	.....
Do	31	9031	.....
Do	188	9031	.....
Logansport, Crawfordsville and Southwestern	649	12027	22027
Logansport, Crawfordsville and Southwestern, (late Evansville and Crawfordsville)	465	12012a	22012a
Long Island	174	1006	1233
Do	501	1008	1234
Do	535	1007	1232
Los Angeles and San Pedro	286	14728	46013
Louisville, Cincinnati and Lexington	74	9607a	20004
Do	175	9607	20003
Do	481	9846a	20017
Louisville and Nashville	55	9608	20005
Louisville and Nashville, (late Paducah and Gulf)	86	9611	20008
Louisville and Nashville	443	9610	20007
Do	544	9610	20007
Do	545	9742	20012
Do	695	9609	20006
Louisville and Nashville and Great Southern, (late Louisville and Nashville)	90	10010	19010
Macon and Western	683	6143	.....
Madison and Portage. (See Chicago and Superior.)			
Maine Central	106	9	2
Maine Central, (late Portland and Kennebeck)	131	115	5
Do	132	115	5
Do	235	1	1
Maine Central	329	9a	3
Maine Central, (Belfast division)	448	201	11
Manchester and Lawrence	147	627	622
Maryland and Delaware	455	3403	.....
Mayaville and Lexington	419	9843	20016
Memphis and Charleston	83	6605	.....
Memphis and Little Rock	172	7501	.....
Memphis, Carthage and Northwestern	532	10521a	28021
Memphis, Clarksville and Louisville	145	10009	19009
Michigan Central	56	12506	24005
Do	375	12511	24010
Michigan Central, (lessees Jackson, Lansing and Saginaw)	467	12510	24009
Michigan Central	487	12526	24025
Do	536	12519	24019
Do	634	12528	24027
Do	726	11413	23022
Michigan Lake Shore	556	12523	24023
Middleborough and Taunton	578	676	640
Midland Pacific	366	14483	34005
Milwaukee and Saint Paul. (See Chicago, Milwaukee and Saint Paul.)			
Milwaukee, Lake Shore and Western	29	13020	25018
Do	672	13020	25018
Mineral Point	454	13011	25020
Do	597	13015	25021
Missisasquoi and Clyde Rivers	360	523	522
Mississippi Valley and Western	424	10519a	28018
Missouri, Iowa and Nebraska	606	10516a	28016
Missouri, Kansas and Texas	79	10512	28011
Do	320	14006	33006
Do	696	10515a	28014
Mobile and Girard	526	6608	.....
Mobile and Montgomery	66	6612	.....
Monadnock	466	738	657
Monticello and Port Jervis	546	1564	1270
Montreal and Plattsburgh	278	1021	1243
Morgan's Louisiana and Texas	95	8001	.....
Do	615	8098	.....
Nashville and Chattanooga	714	10095	19015
Nashville and Chattanooga. (See Nashville, Chattanooga and Saint Louis.)			
Nashville and Decatur	239	10006	19006
Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga)	38	10004	19004
Do	84	10004	19004
Do	91	10004	19004
Do	253	10007	19007
Do	655	10004	19004
Naugatuck	208	942	908
Do	283	942	908
New Bedford, (late Taunton Branch)	97	677	641
New Bedford, (late New Bedford and Taunton)	207	678	642
Do	352	672	639
New Haven and Derby	436	977	915
New Haven and Northampton	224	938	906
Do	282	938	906
Do	599	746	661
New Haven, Middletown and Willimantic	474	975	913
New Jersey Midland	211	2254	.....

Index to Table E—Continued.

Title.	Order.	Number of route.	New number of route.
New London Northern. (See Central Vermont.)			
New Orleans, Jackson and Great Northern	44	8002	.....
New Orleans, Mobile and Texas	133	6613	.....
Do	558	8090	.....
New York and Canada, (late Vermont Central and Vermont and Canada)	394	1582	1263
New York and Oswego Midland	440	1454	1248
Do	491	1586	1240
Do	493	1540	1235
Do	600	1569	1238
Do	612	1546	1236
Do	618	.....	1292
Do	635	1585	1239
New York Central and Hudson River	3	1079	1217
Do	4	1002	1211
Do	22	1282	1218
Do	108	1027	1213
Do	232	1037	1216
Do	249	1016	1212
Do	367	1030	1214
Do	381	1036	1215
New York, Kingston and Syracuse, (Trustees first-mortgage bonds)	502	1576	1268
New York, New Haven and Hartford	80	936	904
Do	277	932	903
North and South	710	6231	.....
Northern	103	254	253
Do	522	254	253
Northern Central	17	3502	.....
Do	622	2423	.....
Northern Pacific	314	.....	43001
Do	400	13838	26005
North Missouri. (See Saint Louis, Kansas City and Northern.)			
North Pennsylvania	160	2404	.....
Do	280	2404	.....
Northwestern North Carolina	553	5280	.....
Ogdensburgh and Lake Champlain. (See Central Vermont.)			
Oil Creek and Allegheny River, and Buffalo, Corry and Pittsburgh, (late Allegheny Valley)	210	2425	.....
Do	343	2425	.....
Do	349	2425	.....
Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh	453	1043	1252
Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley)	679	2470	.....
Old Colony and Newport	109	609	609
Do	186	654	634
Old Colony and Newport, (operating Cape Cod)	353	.....	737
Old Colony and Newport	357	731	653
Do	480	615	614
Do	692	655	635
Omaha and Northwestern	500	14478	34003
Orange, Alexandria and Manassas. (See Washington City, Virginia Midland and Great Southern.)			
Oswego and Syracuse	233	1029	1256
Owensborough and Russellville. (See Evansville, Owensborough and Nashville.)			
Paducah and Gulf. (See Paducah and Memphis.)			
Paducah and Gulf. (See Louisville and Nashville.)			
Paducah and Memphis, (late Paducah and Gulf)	555	9612	36[illegible]
Paducah and Memphis	680	10015	1[illegible]
Paris and Danville	704	11918	23[illegible]
Paris and Decatur	677	11914	23[illegible]
Peninsular. (See Chicago and Lake Huron.)			
Pennsylvania	5	2103	.....
Do	7	2101	.....
Do	9	2401	.....
Do	81	2422	.....
Do	138	2105	.....
Do	139	2105	.....
Do	156	2422	.....
Do	161	2422	.....
Do	251	2116	.....
Do	262	2109	.....
Do	268	2427	.....
Do	306	2440	.....
Do	308	2436	.....
Do	310	2439	.....
Do	327	2439	.....
Do	334	2475	.....
Do	346	2443	.....
Do	429	2109	.....
Do	446	2415	.....
Do	482	2454	.....
Do	486	2457	.....
Do	496	2432	.....
Do	514	2432	.....
Do	520	2125	.....
Do	531	2430	.....
Do	537	2446	.....
Do	564	2117	.....
Do	610	2118	.....
Do	630	2114	.....
Do	632	2108	.....
Do	633	2109	.....
Do	636	2437	.....
Do	637	2457	.....
Do	638	2131	.....
Do	668	2462	.....
Do	676	2469	.....
Pennsylvania, (late Pennsylvania and Delaware)	690	2482	.....
Pennsylvania and Delaware. (See Pennsylvania.)			
Pennsylvania Company	317	9047	.....
Do	585	9048	.....
Pennsylvania Company. (See Indianapolis and Vincennes.)			
Pensacola and Louisville	518	6404	.....
Peoria and Rock Island	410	11424	23[illegible]
Peoria, Pekin and Jacksonville	383	11414	23[illegible]
Do	432	11414	23[illegible]
Philadelphia and Baltimore Central	250	2408	.....
Do	275	2408	.....
Philadelphia and Darby	191	2405	.....
Philadelphia and Reading	15	2476	.....
Do	115	2402	.....
Do	296	2414	.....
Do	430	2413	.....
Do	439	2405	.....
Do	584	2451	.....
Do	593	2467	.....
Do	607	2463	.....
Do	651	2482	.....
Do	665	2457	.....
Do	669	2462	.....
Do	673	2452	.....
Do	706	2460	.....
Do	720	2467	.....
Do	727	2467	.....
Philadelphia, Wilmington and Baltimore	10	3501	.....
Do	137	3401	.....

Index to Table E—Continued.

Title.	Order.	Number of route.	New number of route.
Philadelphia, Wilmington and Baltimore	506	3501	.....
Pit Hole Valley	716	2459	.....
Pittsburgh and Connellsville	368	2464	.....
Do	441	2464	.....
Do	601	2464	.....
Pittsburgh, Cincinnati and Saint Louis	20	9036	.....
Do	100	12009	22009
Do	204	9012	.....
Do	294	9034	.....
Do	311	2456	.....
Do	385	12013	22013
Do	509	9036	.....
Do	549	12016	22016
Portland and Kennebeck. (See Maine Central.)			
Portland and Ogdensburgh	358	521	410
Portland and Rochester	338	117	7
Port Royal	540	5707	.....
Portland, Saco and Portsmouth. (See Eastern.)			
Portsmouth, Great Falls and Conway	406	309	260
Providence and Worcester	231	801	801
Do	623	748	662
Providence, Warren and Bristol	339	803	803
Queen Anne and Kent	574	3511	.....
Quincy, Missouri and Pacific	422	10530a	28019
Raleigh and Augusta Air-Line	451	5216	.....
Raleigh and Gaston	259	5001	.....
Reading and Columbia	470	2431	.....
Do	483	2431	.....
Richmond and Danville	113	4407	.....
Do	114	5004	.....
Do	212	5004	.....
Do	213	5004	.....
Richmond and York River	724	4408	.....
Richmond, Fredericksburgh and Potomac	37	4401	.....
Rochester and Pine Creek	582	1587	1262
Rockford, Rock Island and Saint Louis	198	11429	23005
Do	711	11430	23006
Rockville. (See Hartford, Providence and Fishkill.)			
Rome, Watertown and Ogdensburgh	128	1026	1227
Do	129	1026	1227
Do	391	1042	1225
Do	398	1024	1226
Rutland and Burlington. (See Central Vermont.)			
Sacramento Valley	404	14705	46005
Saginaw Valley and Saint Louis	670	12949	24030
Saint Clair and Chicago Air-Line	568	12513	24012
Saint Croix and Penobscot	187	84	4
Saint Joe and Denver City	347	14004	33004
Saint Louis, Alton and Terre Haute	169	11422	23030
Saint Louis and Iron Mountain and Cairo and Fulton	167	10502	28002
Do	374	10502	28002
Do	613	10502	28002
Saint Louis and Southeastern. (See Saint Louis and Southeastern Consolidated.)			
Saint Louis and Southeastern Consolidated. (late Edgefield and Kentucky)	194	10008	19008
Saint Louis and Southeastern Consolidated, (late Saint Louis and Southeastern)	195	11900	23032
Do	231	9612a	20010
Do	656	11900	23032
Saint Louis, Council Bluffs and Omaha. (See Brunswick and Chillicothe and Saint Louis, Council Bluffs and Omaha.)			
Saint Louis, Kansas City and Northern, (late North Missouri)	53	10504	28004
Do	57	10504	28004
Do	64	10504	28004
Do	258	10507	28007
Saint Louis, Kansas City and Northern, (late North Missouri)	444	10509	28009
Saint Paul and Pacific	266	13507	26002
Do	458	13840	26003
Do	460	13506	26001
Saint Paul and Sioux City	379	13505	26004
Savannah and Charleston	118	5606	.....
Savannah and Memphis	705	6616	.....
Selma, Marion and Memphis	569	6606	.....
Sheyboygan and Fond du Lac	332	13012	25019
Shepaug, (late Shepang Valley)	417	981	917
Shepaug Valley. (See Shepaug.)			
Sioux City and Pacific	243	11011	27029
Do	471	11011	27029
Skaneateles	297	1046	1251
Sodus Point and Southern	609	1590	1285
Somerset and Mineral Point	552	2472	.....
South and North Alabama	155	6604	.....
Do	236	6604	.....
Do	260	6604	.....
South Carolina	123	5605	.....
Do	265	5605	.....
Do	322	5605	.....
Do	576	5605	.....
Southern Central	414	1542	1276
Southern Minnesota	319	13501	26016
Southern Pacific	181	14702	46002
Do	196	14702	46002
Do	384	14945	46014
Southern Railroad Association	45	7001	.....
Southern Railway Security Co	665	10005	19005
South Shore	397	656	636
Southwestern	234	6010	.....
Do	264	6015	.....
Do	498	6015	.....
Do	671	6015	.....
Spartanburgh and Union	666	5610	.....
Springfield and Illinois Southeastern	255	11433	23033
Springfield, Athol and Northeastern, (late Athol and Enfield)	427	658	741
Staten Island	200	1035	1260
Stockton and Copperopolis	503	14881	46012
Do	525	14881	46012
Stonington and Providence	112	802	802
Stonghton Branch. (See Boston and Providence.)			
Sullivan. (See Central Vermont.)			
Suncook Valley	699	342	262
Susquehanna, Gettysburgh and Potomac	324	2434	.....
Sycamore and Cortland	220	11410	23052
Syracuse and Chenango	507	1581	1264
Syracuse, Binghamton and New York	197	1028	1257
Syracuse Northern	447	1577	1267
Taunton Branch. (See New Bedford.)			
Tennessee and Pacific	469	10123	19016
Tennessee Coal and Railroad Company	707	10014	19013
Texas and Pacific	218	8506	.....
Texas, Mississippi River and Northwestern, (late Little Rock, Pine Bluff and New Orleans)	642	7525a	.....

Index to Table E—Continued.

Title.	Order.	Number of route.	New number of route.
Toledo, Peoria and Warsaw	307	11411	23027
Do	577	11411	23027
Toledo, Wabash and Western	23	9022	.....
Do	85	11426	23023
Do	273	9022	.....
Do	341	9022	.....
Do	365	11903	23025
Do	521	11916	23026
Do	533	11903	23025
Do	657	11427	23004
Towanda Coal Company. (See Erie.)			
Troy and Boston	116	1017	1259
Do	124	1017	1259
Trustees first-mortgage bonds. (See New York, Kingston and Syracuse.)			
Tuskegee	617	6619	.....
Union Pacific	19	14401	34001
Utah Central	371	16633	41001
Utica and Black River	295	{1025} {1181}	1283
Do	611	1593	1288
Utica, Ithaca and Elmira	434	1566	1269
Do	594	.....	1289
Vaca Valley	626	14877	46015
Vermont and Canada. (See Central Vermont.)			
Vermont and Massachusetts	142	690	646
Do	189	690	646
Vermont Central. (See Central Vermont.)			
Vermont Central and Vermont and Canada. (See Central Vermont.)			
Vermont Valley. (See Central Vermont.)			
Vicksburgh and Brunswick	616	6621	.....
Vicksburgh and Meridian	168	7003	.....
Do	254	7003	.....
Do	276	7003	.....
Washington and Ohio	472	4404	.....
Washington City, Virginia Midland and Great Southern, (late Orange, Alexandria and Manassas)	25	4403	.....
Do	328	4405	.....
Do	624	4403	.....
Western Maryland	274	3507	.....
Western, of Alabama	120	6601	.....
Do	270	6607	.....
Do	438	6602	.....
Western Union	387	13003	2501
West Jersey	158	2110	.....
Do	178	2111	.....
Do	267	2112	.....
Do	301	2113	.....
West Wisconsin	362	13014	2501
Do	719	13014	2501
Whitehall and Plattsburgh	645	1518	128
Whitewater Valley	345	9035	.....
Wilmington and Reading	661	2455	.....
Wilmington and Western	666	3405	.....
Wisconsin Central, operated by Phillips & Colby Construction Company	304	13015	2501
Do	325	13014	2501
Do	370	13396	2501
Do	407	13014	2501
Do	678	13014	2501
Wisconsin Valley	602	13019	2502
Worcester and Nashua	164	683	642
Worcester and Somerset	629	3516	.....

Index to Table F.

Index to Table F—Continued.

Title.	Order.	Number of route.	New number of route.
Chicago, Rock Island and Pacific	189	11412	23016
Do	364	11005a	27015
Do	390	11005a	27015
Do	436	11005b	27016
Cincinnati and Martinsville	411	12015	22015
Cincinnati and Terre Haute	459	12029	22029
Cincinnati, Cumberland Gap and Charleston	439	10012	19012
Cincinnati, Hamilton and Dayton	77	9030	.....
Do	141	9029	.....
Cincinnati, La Fayette and Chicago	26	12028	22028
Cincinnati, Richmond and Fort Wayne	366	12020	22020
Cleveland and Pittsburgh	107	9007	.....
Do	169	9003	.....
Cleveland, Columbus, Cincinnati and Indianapolis	37	9046	.....
Do	79	9018	.....
Do	135	9015	.....
Cleveland, Mount Vernon and Delaware	144	9005	.....
Colorado Central	321	17038	38004
Columbus and Hocking Valley	194	9040	.....
Columbus and Xenia	53	9016	.....
Columbus, Chicago and Indiana Central	95	9017	.....
Concord	44	251	251
Do	315	256	255
Concord and Claremont	138	255	254
Connecticut and Passumpsic Rivers. (See Connecticut and Passumpsic Rivers and Massawippi Valley.)			
Connecticut and Passumpsic Rivers and Massawippi Valley, (late Connecticut and Passumpsic Rivers)	89	452	402
Connecticut River	42	702	618
Connecticut Valley	309	976	914
Consolidated European and North American	87	181	9
Consolidated European and North American, (late Bangor and Piscataquis)	339	188	10
Continental Improvement Company	341	12955	24034
Cumberland Valley	404	2474	.....
Danbury and Norwalk	155	945	910
Do	425	945	910
Dayton and Michigan	111	9027	.....
Delaware, Lackawanna and Western	205	2419	.....
Do	215	1228	1229
Do	222	1040	1230
Do	320	1405	1228
Do	345	1545	1231
Denver and Boulder Valley	235	17051	38003
Denver and Rio Grande	253	17064	38001
Detroit and Bay City	260	12529a	24013
Detroit and Milwaukee	159	12507	24006
Detroit, Eel River and Illinois	360	12026	22026
Detroit, Hillsdale and Indiana	429	12525	24024
Detroit, Lansing and Lake Michigan.	272	12517	24017
Do	442	12954	24033
Dubuque and Southwestern	377	11006	27020
Eastern	16	601	601
Eastern, (late Portland, Saco and Portsmouth)	17	114	124
Eastern	264	619	618
Do	391	732	654
Do	450	621	620
Do	466	.....	351
Eastern Kentucky	433	9824	20014
Eastern Shore	266	3402	.....
East Tennessee, Virginia and Georgia	33	10001	16[illegible]
Do	34	10002	19[illegible]
Edgefield and Kentucky. (See Saint Louis and Southeastern Consolidated.)			
Erie	1	1001	1[illegible]
Do	13	1038	1[illegible]
Do	19	1035	1[illegible]
Do	214	1032	1[illegible]
Do	271	1010	1[illegible]
Do	273	1574	1[illegible]
Do	300	2409	.....
Do	301	1033	1[illegible]
Do	369	1045	1[illegible]
Erie, (late Goshen and Deckertown)	444	1567	1[illegible]
Evansville and Crawfordsville	170	12012	2[illegible]
Evansville, Owensborough and Nashville, (late Owensborough and Russellville)	385	9842	20[illegible]
Fall Brook Coal Company	418	2464	.....
Fall River, Warren and Providence	326	821	[illegible]
Fitchburgh	47	604	[illegible]
Do	267	637	[illegible]
Flint and Père Marquette	136	12515	24[illegible]
Do	334	12516	24[illegible]
Do	460	12948	24[illegible]
Fort Wayne, Jackson and Saginaw	333	12509	24[illegible]
Fort Wayne, Muncie and Cincinnati	330	12019	22[illegible]
Goshen and Deckertown. (See Erie.)			
Grand Rapids, Newaygo and Lake Shore	396	12527	24[illegible]
Grand Trunk	119	116	[illegible]
Do	308	12508	24[illegible]
Hannibal and Saint Joseph	36	10505	24[illegible]
Do	40	10510	24[illegible]
Do	238	10505	24[illegible]
Harlem Extension. (See Central Vermont.)			
Hartford, Providence and Fishkill	220	955	[illegible]
Housatonic	196	943	[illegible]
Do	401	943	[illegible]
Do	463	943	[illegible]
Illinois Central	70	11407	23[illegible]
Do	92	11407	23[illegible]
Do	116	11418	23[illegible]
Do	157b	11007	27[illegible]
Do	220	11010	27[illegible]
Indianapolis, Bloomington and and Western	90	12017	22[illegible]
Indianapolis, Cincinnati and La Fayette	23	12003	22[illegible]
Do	97	12005	22[illegible]
Indianapolis, Peru and Chicago	168	12004	22[illegible]
Iowa Eastern	405	11028a	27[illegible]
Jacksonville, Northwestern and Southeastern	451	11909	25[illegible]
Jacksonville, Pensacola and Mobile	379	6402	.....
Jeffersonville, Madison and Indianapolis	121	12007	23[illegible]
Junction and Fort Kearney	302	14314	38[illegible]
Kansas Central	267	14235	38[illegible]
Kansas City, Saint Joseph and Council Bluffs	115	10506	24[illegible]
Do	310	10508	24[illegible]
Kansas Pacific	73	14001	38[illegible]
Do	184	14001	38[illegible]
Kentucky Central	156	9006	20[illegible]
Do	226	9006	20[illegible]

Index to Table F—Continued.

Index to Table F—Continued.

Title.	Order.	Number of routes.	New number of route.
Old Colony and Newport	353	654	634
Old Colony and Newport, operating Cape Cod	354	......	737
Old Colony and Newport	441	655	635
Orange, Alexandria and Manassas. (See Washington City, Virginia Midland and Great Southern.)			
Oswego and Syracuse	172	1029	1256
Owensborough and Russellville. (See Evansville, Owensborough and Nashville.)			
Paducah and Gulf. (See Louisville and Nashville.)			
Paducah and Memphis	447	10015	19014
Paris and Danville	423	11918	23050
Pennsylvania	7	2103	......
Do	8	2104	......
Do	11	2401	......
Do	71	2422	......
Do	147	2422	......
Do	218	2116	......
Do	257	2427	......
Do	270	2440	......
Do	275	2436	......
Do	286	2439	......
Do	296	2443	......
Do	308	2105	......
Do	351	2415	......
Do	407	2475	......
Do	415	2105	......
Do	417	9048	......
Pennsylvania, (late Pennsylvania and Delaware)	454	2488	......
Pennsylvania	456	2109	......
Do	458	2131	......
Pennsylvania Company	324	9047	......
Peoria and Rock Island	307	11428	23040
Peoria, Pekin and Jacksonville	241	11414	23038
Do	338	11414	23038
Philadelphia and Baltimore Central	212	2408	......
Philadelphia and Reading	39	2476	......
Do	313	2414	......
Do	337	2413	......
Do	342	2405	......
Do	381	2428	......
Do	430	2451	......
Do	445	2460	......
Do	461	2407	......
Do	465	2477	......
Philadelphia, Wilmington and Baltimore	10	3501	......
Do	146	3401	......
Pittsburgh and Connellsville	204	2464	......
Do	347	2464	......
Pittsburgh, Cincinnati and Saint Louis	41	9036	......
Do	175	9012	......
Do	239	12009	22009
Do	246	12013	22013
Do	277	2456	......
Portland and Kennebeck (See Maine Central.)			
Portland and Ogdensburgh	128	521	410
Portland and Rochester	276	117	7
Portland, Saco and Portsmouth. (See Eastern.)			
Portsmouth, Great Falls and Conway	298	309	260
Providence and Worcester	153	801	801
Providence, Warren and Bristol	318	803	803
Quincy, Missouri and Pacific	322	10520a	28019
Raleigh and Augusta Air-Line	356	5216	......
Richmond and Danville	125	4407	......
Do	126	5004	......
Do	245	5004	......

Title.	Order.	Number of routes.	New number of route.
Richmond and York River	403	4408	......
Richmond, Fredericksburgh and Potomac	25	4401	......
Rockford, Rock Island and Saint Louis	221	11429	23005
Rome, Watertown and Ogdensburgh	190	1026	[illegible]
Do	267	1042	[illegible]
Do	284	1024	[illegible]
Do	285	1026	[illegible]
Rutland and Burlington. (See Central Vermont.)			
Sacramento Valley	289	14705	[illegible]
Saginaw Valley and Saint Louis	438	12949	[illegible]
Saint Croix and Penobscot	387	64	4
Saint Joseph and Denver City	331	14004	33004
Saint Louis and Iron Mountain and Cairo and Fulton	217	10502	[illegible]
Saint Louis and Southeastern. (See Saint Louis and Southeastern Consolidated.)			
Saint Louis and Southeastern Consolidated, (late Edgefield and Kentucky)	148	10008	[illegible]
Saint Louis and Southeastern Consolidated, (late Saint Louis and Southeastern)	150	11900	[illegible]
Do	157	9612a	[illegible]
Do	394	11900	[illegible]
Saint Louis, Council Bluffs and Omaha. (See Brunswick and Chillicothe and Saint Louis, Council Bluffs and Omaha.)			
Saint Louis, Kansas City and Northern, (late North Missouri)	81	10504	[illegible]
Do	244	10507	[illegible]
Do	349	10509	[illegible]
Saint Paul and Pacific	261	13507	[illegible]
Do	365	13540	[illegible]
Saint Paul and Sioux City	225	13505	[illegible]
Savannah and Charleston	149	5606	......
Savannah and Memphis	443	6616	......
Sheboygan and Fond du Lac	382	13912	[illegible]
Shepaug, (late Shepaug Valley)	317	981	[illegible]
Shepaug Valley. (See Shepaug.)			
Sioux City and Pacific	203	11011	[illegible]
South and North Alabama	143	6604	......
Do	167	6604	......
Do	247	6604	......
South Carolina	223	5605	......
Do	258	5605	......
Do	259	5605	......
Southern Central	312	1542	[illegible]
Southern Pacific	219	14702	[illegible]
Do	244	14945	[illegible]
Do	422	14702	[illegible]
Southern Railway Security Company	414	10005	[illegible]
South Shore	329	656	[illegible]
Southwestern	254	6015	......
Spartanburgh and Union	400	5610	......
Staten Island	383	1005	[illegible]
Stonington and Providence	112	602	[illegible]
Sullivan. (See Central Vermont.)			
Suncook Valley	378	342	[illegible]
Syracuse Northern	346	1577	[illegible]
Taunton Branch. (See New Bedford.)			
Texas, Mississippi River and Northwestern, (late Little Rock, Pine Bluff and New Orleans)	428	7325a	......
Toledo, Peoria and Warsaw	279	11411	[illegible]
Do	413	11411	[illegible]
Toledo, Wabash and Western	21	9022	[illegible]
Do	23	9022	[illegible]
Do	100	11426	[illegible]

Index to Table F—Continued.

Title.	Order.	Number of route.	New number of route.
Toledo, Wabash and Western	182	9022	.....
Do	195	11903	23025
Do	291	9022	.....
Do	393	11903	23025
Do	395	11427	23024
Troy and Boston	134	1017	1259
Do	370	1017	1259
Union Pacific	15	14401	34001
Utah Central	213	16633	41001
Utica and Black River	274	{1025 / 1181}	1283
Utica, Ithaca and Elmira	278	1566	1269
Vermont and Canada. (See Central Vermont.)			
Vermont and Massachusetts	93	690	646
Do	98	690	646
Do	420	690	646
Vermont and Massachusetts. (See Central Vermont.)			
Vermont Central. (See Central Vermont.)			
Vermont Central & Vermont & Canada. (See Central Vermont.)			
Vermont Valley. (See Central Vermont.)			
Washington City, Virginia Midland and Great Southern, (late Orange, Alexandria and Manassas)	30	4403	.....
Western Union	252	13003	25013
West Jersey	151	2110	.....
West Wisconsin	173	13014	25014
Do	464	13014	25014
Whitehall and Plattsburgh	392	1518	1280
Whitewater Valley	292	9035	.....
Wilmington and Reading	402	2455	.....
Wilmington and Western	449	3405	.....
Wisconsin Central, operated by Phillips & Colby Construction Company	209	13396	25016
Do	251	13018	25017
Do	303	13018	25017
Do	446	13018	25017
Wisconsin Valley	421	13019	25022
Worcester and Nashua	158	683	643

F.—*Table showing the re-adjustment, under the act of March 3, 1873, of the rates of pay per upon returns of the weight of the mails, the speed with which they are conveyed, the*

[ABBREVIATIONS.—f f., fixtures and furniture; f. f. c., fixtures and furniture complete; m. c., mail line; t. l., triple line; q. l., quadruple line; r. a., route-agents; m. m., mail messenger. A number form being inconvenient. The figures in parentheses in the "Remarks" column refer to the order

Order	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	*Pounds.*	
1	N. Y..	1001	1201	New York, Dunkirk .	Erie.....	459	39,170	33
2	Ohio ..	9008	.....	Elyria, Millbury.....	Lake Shore and Michigan Southern.	74.98	39,057	28
3	Mass..	605	605	Boston, Springfield...	Boston and Albany.....	101	37,462	30
4	N. Y..	1079	1217	Albany, Buffalo	New York Central and Hudson River.	298	32,378	30
5	N. Y..	1002	1211	New York, Troy	.....do	150	31,992	30
6	Ohio ..	12501½	9049	Toledo, Elkhart.....	Lake Shore and Michigan Southern.	133.60	28,629	29
7	N. J ..	2103	.....	New York, New Brunswick.	Pennsylvania	36	27,997	30
8	N. J ..	2104	.....	New Brunswick, Philadelphia.	.....do	54	27,960	30
9	N. Y. Ohio. Ohio. Mich.	1039 9004 9021 12501	1241	Buffalo, Chicago	Lake Shore and Michigan Southern.	543.85	25,792	28
10	Md ...	3501	.....	Baltimore, Philadelphia.	Philadelphia, Wilmington and Baltimore.	100	17,248	33
11	Pa	2401	.....	Philadelphia, Pittsburgh.	Pennsylvania	353.60	21,647	29
12	Mass..	605	605	Springfield, Albany..	Boston and Albany	102	17,772	31
13	N. Y..	1038	1208	Buffalo, Hornellsville	Erie.....	91	16,634	30
14	Md ...	3504	.....	Washington, Wheeling.	Baltimore and Ohio.....	353	11,403	29

mile on certain railroad routes, and on certain new routes the adjustment of the rates, based accommodations provided for mails and agents, and the number of trips per week.

catchers: r. p. o., railway post-office; apt., apartment; b. c., baggage-car; s. l., single line; d. l., double followed by an asterisk (*) shows the equivalent in round trips, a more particular statement in tabular of the routes in this table.]

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
r. p. o., 50 by 9.6, f. f. c., d. l.; r. a. apts., 42 by 11, 26 by 11, 16 by 11, f. f. c., s. l. 66 m.	20½*	705 00	375 00	323, 595 00	172 500 00	July 1, 1873	1 mile decrease.	1
r. p. o., 51.6 by 10.9, f. f. c., m. c., d. l.	26	705 00	50 00	52, 860 90	3, 749 00	July 1, 1873	.....	2
r. p. o., (average,) 30.5 by 8.8, f. f., q. l.	26	680 00	375 00	68, 680 00	37, 875 00	July 1, 1873	Part; residue $396.50, (12.)	3
r. p. o., 48 by 9, f. f. c., d. l. to Rochester, 229 m., s. l residue, 69 m.	34*	602 00	375 00	177, 326 00	111, 750 00	July 1, 1873	69 miles now at $572.	4
r. p. o., 48 by 9, f. f. c., d. l.	54*	597 00	375 00	89, 550 00	56, 250 00	July 1, 1873	.....	5
r. p. o., 51.6 by 10.9, f. f. c., m. c., d. l.	26	575 00	75 00	76, 820 00	10, 020 00	July 1, 1873	Formerly in Michigan section.	6
r. o. p., 50 by 9, f. f., d. l.; r. a. apt., 11 by 8.5, f. f., 2½ l.	65½*	567 00	375 00	20, 412 00	13, 500 00	July 1, 1873	.....	7
r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 11 by 8.5., f. f., d. l.	84½*	558 00	375 00	30, 132 00	20, 250 00	July 1, 1873	.....	8
r. p. o., 51.6 by 10.9, f. f. c., d. l., 319.7 m., (Buffalo to Elyria, Millbury to Toledo, and Elkhart to Chicago,) with additional r. p. o., 41 by 10.9, f. f. c., a.., 1357.5 m., (Cleveland to Chicago.)	23½*	523 64	375 00	234, 762 25	203, 943 75	July 1, 1873	Routes consolidated from 1½ Jan., 1874, reducing distance to 542 miles and pay to $283,833.50, 135.2 miles at $565,184.5 miles at $540, and 222.3 miles at $485; average, $523.67.	9
r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 24 by 9, f. f., q. l. to Lamokin, 14½ m., d. l. to Wilmington, 13½ m., and s. l. residue, 72 m.	25½*	440 00	375 00	44, 000 00	37, 500 00	July 1, 1873	.....	10
r. p. o., 46 by 8.4., f. f. c., s. l.; r. a. apt., 10.9 by 8, f. f. c., s. l.	40½*	438 00	375 00	154, 876 80	132, 600 00	July 1, 1873	.....	11
r. p. o., (average,) 30.5 by 8.8, f. f., d. l.	13	396 50	300 00	40, 433 00	30, 600 00	July 1, 1873	Part; residue $680, (3.)	12
r. p. o., 42 by 11, 26 by 11, 16 by 11, (average, 28 by 11,) f. f. c., s. l.	22½	362 50	375 00	32, 987 50	34, 125 00	July 1, 1873	.....	13
r. p. o., 52.4 by 8.9, f. f., d. l. to Grafton, 254 m., s. l. residue, 99 m.; r. a. apt., 17 by 8.7½, f. f., s. l. between Grafton and Wheeling, 99 miles.	18*	360 00	285 00	123, 120 00	100, 605 00	July 1, 1873	99 miles at $320	14

F.—*Table showing the re-adjustment, under the act of March 3, 1873.*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails who'e distance per day.	Miles per hour.
						Miles.	*Pounds.*	
14a	W. Va.	4102	.....	Grafton, Parkersburgh.	Baltimore and Ohio.....	104	9,096	26
15	Nebr..	14401	34001	Omaha, Ogden	Union Pacific.....	1,032.20	10,963	2[illegible]
16	Mass..	601	601	Boston, Portsmouth..	Eastern	56.50	8,669	24
17	Me....	114	124	Portland, Portsmouth	Eastern, (late Portland, Saco and Portsmouth.)	52	7,683	24
18	Ill....	11404	23015	Chicago, Davenport..	Chicago, Rock Island and Pacific.	183	9,293	2[illegible]
19	N. Y..	1035	1207	Attica, Corning	Erie.....	111	10,856	30
20	Ill....	11403	23003	Chicago, Clinton	Chicago and Northwestern....	139	7,793	24
21	Ohio..	9022	.....	La Fayette, Quincy ..	Toledo, Wabash and Western	278	7,701	24
22	Ill....	11405	23007	Chicago, Burlington..	Chicago, Burlington and Quincy.	207.70	7,643	24
23	Ind...	12003	22003	Indianapolis, Cincinnati.	Indianapolis, Cincinnati and La Fayette.	113.50	7,241	28
24	Ill....	11405	23007	Chicago, Burlington..	Chicago, Burlington and Quincy.	207.70	6,916	2[illegible]
25	Va....	4401	.....	Washington, Richmond.	Richmond, Fredericksburgh and Potomac.	131	6,189	30
26	Ind...	12028	22028	La Fayette, Kankakee	Cincinnati, La Fayette and Chicago.	57.35	6,806	25
27	Ind...	12005	22005	Indianapolis, La Fayette.	Indianapolis, Cincinnati and La Fayette.	654	6,797	2[illegible]
28	Ohio..	9022	.....	Toledo, La Fayette..	Toledo, Wabash and Western .	198	7,701	24
29	Ill....	11403	23063	Clinton, Council Bluffs.	Chicago and Northwestern....	351	6,369	24
30	Va....	4403	.....	Alexandria, Lynchburgh.	Washington City, Virginia Midland and Great Southern, (late Orange, Alexandria and Manassas.)	171	7,059	21
31	Iowa..	11005	27014	Davenport, Missouri River.	Chicago, Rock Island and Pacific.	318	6,614	2[illegible]
32	Pa....	2749	.....	Easton, Allentown ...	Lehigh Valley.....	16.58	7,490	25
33	Tenn .	10001	19001	Knoxville, Bristol....	East Tennessee, Virginia and Georgia.	130.70	6,542	1[illegible]
34	Tenn .	10002	19002	Knoxville, Chattanooga.	.....do.....	112	6,549	1[illegible]
35	Va....	4414	.....	Lynchburgh, Bristol .	Atlantic, Mississippi and Ohio.	205	6,322	19
36	Mo ...	10505	28005	Quincy, Saint Joseph.	Hannibal and Saint Joseph	203.50	6,020	2[illegible]

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
r. p. o., 52.4 by 8.9, f. f., d. l.	14	330 00	175 00	34, 320 00	18, 200 00	July 1, 1873	.....	14a
r. p. o., (say,) 50 by 9, f. f. c., s. l.	7	315 00	275 00	325, 143 00	283, 855 00	July 1, 1873	r. p. o., with platforms, 54.5 by 9.9.	15
r. p. o., 40 by 8.9, f. f. d. l.; r. a. apt., 22 by 9, f. f., ½ l.	30½*	295 00	200 00	16, 667 50	11, 300 00	July 1, 1873	.....	16
r. p. o., 40 by 8.9, f. f., d. l.; r. a. apt., 22 by 9, f. f., ½ l.	18	283 00	175 72	14, 716 00	9, 137 44	July 1, 1873	.....	17
r. p. o., 46.6 by 10, s. l. 159 m., d. l. 24 m.	12	280 00	200 00	51, 840 00	36, 600 00	July 1, 1873	24 miles at $305 from 1st Dec., 1873.	18
42 by 11, 26 by 11, 16 by 11, f. f. c., s. l.	19½	275 00	300 00	30, 525 00	33, 300 00	July 1, 1873	.....	19
r. p. o., (say,) 50 by 10, f. f., s. l.	19½*	275 00	200 00	38, 225 00	27, 800 00	July 1, 1873	Part; residue $255, (29.) r. p. o., with platforms, 56 by 10.	20
r. p. o., 50 8 by —, f. f., s. l.	12	273 00	225 00	69, 888 00	62, 550 00	July 1, 1873	Pay for 256 miles; 22 miles, Camp Point to Quincy, covered by route 11417, omitted in re-adjustment. Part; residue, $255, (28.)	21
r. p. o., (say,) 50 by 9, f. f. c., s. l.	20½*	273 00	265 00	56, 702 10	55, 039 50	Jan. 1, 1874	r. p. o., with platforms, 58 by 9. Company report r. p. o. 55.6 by 9.6 from Mar. 30, 1874.	22
r. p. o., 50 by —, f. f. c.; r. a. apt., 12 by 7.5, f. f., s. l.	19	268 00	150 00	30, 418 00	17, 025 00	Oct. 14, 1873	.....	23
r. p. o., (say,) 50 by 9, f. f. c., s. l.	20½*	265 00	225 00	55, 040 50	46, 732 50	July 1, 1873	Main route; branches $50.	24
r. p. o., 43 by —, f. f. c., d. l.	13	265 00	200 00	34, 715 00	26, 200 00	July 1, 1873	.....	25
r. p. o., 50 by 10, f. f. c., s. l.; r. a. apt., 10 by 8, 8 by 8, f. f., s. l.	13	262 00	150 00	15, 025 70	8, 602 50	Oct. 14, 1873	18.4 miles covered by route 11916.	26
r. p. o., 50 by —, f. f. c., s. l.; r. a. apt., 12 by 7.5, f. f., s. l.	19	262 00	150 00	17, 193 75	9, 843 75	Oct. 14, 1873	.....	27
r. p. o., 36 by —, f. f., s. l.	12	255 00	225 00	50, 490 00	44, 550 00	July 1, 1873	Part; residue $273, (21.) Branches $90 (182) and $62, (291.)	28
r. p. o., (say,) 50 by 10, f. f., s. l.	18	253 00	200 00	89, 505 00	70, 200 00	July 1, 1873	Part; residue $275, (20.) r. p. o., with platforms, 56 by 10.	29
r. p. o., 42.3 by —, f. f. c., s. l.	13	250 00	225 00	42, 750 00	38, 475 00	July 1, 1873	.....	30
r. p. o., 46.6 by 10, d. l. 54 m., s. l. residue.	12	250 00	150 00	80, 850 00	47, 700 00	July 1, 1873	54 miles now at $275.	31
22 by 8.6, f. f., 2½ lines.	35*	246 00	300 00	4, 078 68	4, 974 00	July 1, 1873	.....	32
40.6 by 9.6, f. f., s. l.	14	244 00	225 00	31, 890 80	29, 407 50	July 1, 1873	.....	33
r. p. o., 40.6 by 9.6, f. f., s. l.	14	244 00	225 00	27, 328 00	25, 200 00	July 1, 1873	Main route; branch $100.	34
r. p. o., 40.5 by 9, f. f. c., s. l.	14	240 00	225 00	49, 200 00	46, 125 00	July 1, 1873	.....	35
r. p. o., 40 by 9.10, s. l.	13	237 50	175 00	42, 331 25	35, 612 50	July 1, 1873	Main route; branch $75, (238.)	36

F.—*Table showing the re-adjustment, under the act of March 3, 1873.*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	*Pounds.*	
37	Ohio ..	9046	.....	Cleveland, Cincinnati.	Cleveland, Columbus, Cincinnati and Indianapolis.	245. 25	5, 964	
38	Cal ...	14701	46001	San Francisco, Ogden	Central Pacific	877. 50	5, 296	
39	Pa	2476	.....	Allentown, Harrisburgh.	Philadelphia and Reading	90	7, 587	
40	Mo ...	10510	28010	Kansas City, Cameron	Hannibal and Saint Joseph	54	5, 61[illegible]	
41	Ohio ..	9036	.....	Columbus, Pittsburgh	Pittsburgh, Cincinnati and Saint Louis.	160	7, 625	
42	Mass .	702	648	Springfield, South Vernon Junction.	Connecticut River.....	50	5, 499	
43	Wis ..	13005	25002	Milwaukee, La Crosse	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	198	5, 257	
44	N. H..	251	251	Concord, Nashua.....	Concord	36	5, 816	
45	Me ...	9	2	Waterville, Bangor ..	Maine Central.....	55	3, 625	
46	Mo ...	10512	28011	Sedalia, Dennison...	Missouri, Kansas and Texas...	447	4, 099	
47	Mass .	604	604	Boston, Fitchburgh ..	Fitchburgh.....	52	5, 799	
48	Ill ...	11401	23001	Chicago, Milwaukee .	Chicago and Northwestern	87	3, 863	
49	Mo ...	10515*a*	28014	Hannibal, Sedalia	Missouri, Kansas and Texas...	142. 88	3, 654	
50	N. Y..	1282	1218	Rochester, Niagara Falls.	New York Central and Hudson River.	76	4, 051	
51	Mich .	12506	24005	Detroit, Chicago	Michigan Central.....	283. 25	3, 972	
52	Ohio ..	9031	.....	Cincinnati, Xenia	Little Miami	65. 96	5, 856	
53	Ohio ..	9016	.....	Columbus, Xenia	Columbus and Xenia	55	5, 845	
54	Ill	11402	23002	Chicago, Freeport....	Chicago and Northwestern	121	4, 309	
55	Me ...	115	5	Portland, Augusta...	Maine Central, (late Portland and Kennebeck.)	64	4, 067	
56	Wis ..	13001	25009	Chicago, Green Bay..	Chicago and Northwestern	245	3, 297	
57	Wis ..	13017	25012	Winona, Winona Junction.	.....do.....	28	4, 097	
58	Ky ...	9608	20005	Louisville, Nashville.	Louisville and Nashville.....	186. 6	4, 252	
59	Minn .	13513	26013	Saint Paul, Winona..	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	103. 84	3, 925	
60	Mass .	603	603	Boston, Nashua	Boston and Lowell and Nashua and Lowell.	42	5, 436	
61	Vt....	487	407	Brattleborough, Bellows Falls.	Central Vermont, (late Vermont Valley.)	24	4, 806	
62	Vt....	481	405	Bellows Falls, Windsor.	Central Vermont, (late Sullivan.)	25	4, 772	
63	Tenn .	10004	19004	Stevenson, Chattanooga.	Nashville, Chattanooga and Saint Louis, (formerly Nashville and Chattanooga.)	39	4, 380	
64	Md ...	3502	.....	Baltimore, Sunbury..	Northern Central	140	3, 746	
65	Ky ...	9607*a*	20004	Covington, Louisville	Louisville, Cincinnati and Lexington.	108. 25	5, 476	
66	.....	.....	.....	.....	.....	.....	.....	

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
r. p. o., 39.2 by 9.2, f. f. c., s. l.	12	237 00	225 00	58, 124 25	55, 181 25	July 1, 1873	.....	37
r. p. o., 48 by 9.5¾, f. f. c., s. l.	7	233 00	275 00	204, 457 50	241, 312 50	July 1, 1873	.....	38
11.6 by 8.8, f. f., s. l.	21*	232 00	300 00	20, 880 00	27, 000 00	July 1, 1873	.....	39
r. p. o., 40 by 9.10, s. l.	13	232 00	125 00	13, 258 00	7, 480 00	July 1, 1873	$730 ferriage.....	40
15 by 8.6, f. f. and m. c., s. l.	23	230 00	275 00	36, 800 00	40, 000 00	July 1, 1873	.....	41
r. p. o., 23.4 by 6.5, 20.9 by 6.9½, f. f., d. l.	16½*	230 00	150 00	11, 800 00	7, 800 00	July 1, 1873	$300 for mail-messenger.	42
r. p. o., 40 by 10.3, s. l.	12	230 00	150 00	45, 540 00	29, 700 00	July 1, 1873	.....	43
22.3½ by 6.11, f. f., s. l.; r. a. apt., 17 by 7, 12 by 6.8, f. f., d. l. 18 m.	33*	225 00	150 00	8, 100 00	5, 400 00	July 1, 1873	.....	44
r. p. o., 42 by 9, f. f., d. l.	12	225 00	125 00	12, 375 00	6, 875 00	July 1, 1873	Part; residue $175, (86.)	45
r. p. o., 51.2 by 9.10, f. f., s. l.	6	223 00	150 00	99, 681 00	67, 050 00	July 1, 1873	.....	46
r. p. o., 25 by 8, 15 by 7, 12 by 7, 12 by 6.9, 11 by 6.6, (average 15 by 7.) f. f., s. l.	18	220 00	175 00	11, 440 00	9, 100 00	July 1, 1873	.....	47
r. p. o., 42.6 by 10, d. l.	24	220 00	175 00	19, 140 00	15, 225 00	July 1, 1873	.....	48
r. p. o., 51-2 by 9.10, f. f., s. l.	6	215 00	175 00	30, 719 20	25, 004 00	Aug. 3, 1873	.....	49
r. p. o., 48 by 9, f. f. c., s. l.	24	214 00	250 00	16, 264 00	19, 000 00	.....	.....	50
r. p. o., (say) 45 by 10.6 s. l.	33⅓	212 50	175 00	60, 615 62	49, 918 75	July 1, 1873	.....	51
15.6 by 8.6, f. f., s. l.	24	210 00	225 00	13, 851 60	14, 625 00	July 1, 1873	Part; residue $50, (408.) 0.96 m. increase.	52
.....do	24	210 00	325 00	11, 550 00	17, 875 00	July 1, 1873	.....	53
r. p. o., 43.4 by 10, s. l.	12	210 00	150 00	25, 410 00	18, 150 00	July 1, 1873	.....	54
r. p. o., 42 by 9, f. f. c., s. l.; r. a. apt., 16 by —, f. f. c., s. l.	12	210 00	113 35	13, 440 00	7, 254 40	July 1, 1873	Main route; branch $120, (140.)	55
r. p. o., (say) 50 by 10, f. f. c., s. l.	14½*	210 00	175 00	51, 450 00	42, 875 00	July 1, 1873	.....	56
r. p. o., (say) 40 by 10.3, f. f. c., s. l., and r. a. on w. t.	12	209 00	50 00	5, 852 00	1, 400 00	July 1, 1873	.....	57
r. p. o., 31.8 by 9.3, f. f., s. l.; r. a. apt., 14.10 by 7.6.	34½*	207 50	175 00	38, 719 50	32, 655 00	July 1, 1873	.....	58
r. p. o., (say) 40 by 10.3, f. f. c., s. l.	12	207 00	200 00	21, 494 88	20, 768 00	July 1, 1874	r. p. o., with platforms, 46 by 10.3.	59
22 by 9.6, f. f. and m. c., s. l.	18	205 00	150 00	8, 610 00	6, 300 00	July 1, 1873	.....	60
22.6 by 9.3, f. f., d. l.	12	205 00	140 00	4, 920 00	3, 360 00	July 1, 1873	.....	61
.....do	12	205 00	140 00	5, 125 00	3, 500 00	July 1, 1873	.....	62
r. p. o., 23 by 9.10, f. f. c., s. l.	10½*	205 00	200 00	7, 995 00	7, 800 00	July 1, 1873	Part; residue $145, (114;) branch $50, (389.)	63
r. p. o., 40 by 8.6, f. f., s. l.; r. a. apt., 14.6 by 8.6, f. f., s. l.	18	204 00	300 00	28, 560 00	42, 210 00	July 1, 1873	.....	64
9 by 7.3, f. f., s. l.	12	200 00	150 00	21, 650 00	16, 237 50	July 1, 1873	.....	65
.....	.....	.....	.....	.....	.....	.....	Vacant	66

F.—*Table showing the re-adjustment, under the act of March 3, 1873.*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour
						Miles.	*Pounds*	
67	Minn	13513	26013	Saint Paul, Winona	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	103. 84	3, 925	
68	Iowa	11003	27005	Burlington, East Plattsmouth.	Burlington and Missouri River	279. 14	3, 445	
69	Ill	11406	23017	Chicago, East Saint Louis.	Chicago and Alton	283	3, 51	
70	Ill	11407	23020	Chicago, Cairo	Illinois Central	365	2, 94	
71	Pa	2422	.....	Sunbury, Williamsport.	Pennsylvania	39. 8	2, 759	
72	Vt	461	403	White River Junction, Essex Junction.	Central Vermont, (late Vermont Central.)	93	3, 734	
73	Kans	14001	33001	Kansas City, Cheyenne.	Kansas Pacific	745	4, 457	
74	N. H	254	253	Concord, White River Junction.	Northern	69	3, 930	
75	Ill	11417	23010	Galesburgh, Quincy	Chicago, Burlington and Quincy	103	2, 950	
76	Mass	690	744	Miller's Falls, Brattleborough.	Central Vermont, (late Vermont and Massachusetts.)	21	3, 712	
77	Ohio	9030	.....	Cincinnati, Hamilton	Cincinnati, Hamilton and Dayton.	26. 53	3, 069	
78	Vt	412	401	Essex Junction, Saint Albans.	Central Vermont, (late Vermont Central and Vermont and Canada.)	24½	3, 905	
79	Ohio	9018	.....	Galion, Indianapolis	Cleveland, Columbus, Cincinnati and Indianapolis.	204	2, 519	
80	Vt	482	406	Rutland, Burlington	Central Vermont, (late Rutland and Burlington.)	67½	3, 953	
81	Mo	10504	28004	Saint Louis, Kansas City.	Saint Louis, Kansas City and Northern, (formerly North Missouri.)	271. 75	3, 736	
82	Ill	11407	23020	Chicago, Cairo	Illinois Central	365	2, 940	
83	Vt	461	403	Windsor, White River Junction, Essex Junction, Burlington.	Central Vermont, (late Vermont Central.)	96	3, 734	
84	Ill	11921	23035	Chicago, Milwaukee	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	88. 85	4, 556	
85	Conn	936	904	New Haven, New London.	New York, New Haven and Hartford.	50	3, 716	
86	Me	9	2	Danville Junction, Waterville.	Maine Central	55	3, 625	
87	Me	181	9	Bangor, New Brunswick.	Consolidated European and North American.	118. 25	3, 456	
88	Mo	10515a	28014	Hannibal, Sedalia	Missouri, Kansas and Texas	142. 88	3, 454	

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
r. p. o., (say) 40 by 10.3, f. f. c., s. l.	12	200 00	50 00	20, 768 00	5, 192 00	Mar. 4, 1872	Ordered April 1874, to June 30, 1874.	67
r. p. o., 42 by 8.6, s. l.	12	200 00	175 00	55, 828 00	48, 849 50	July 1, 1873	Main route; branch $60, (325.)	68
r. p. o., 32 by 10, f. f. c. and m. c., s. l.; r. a. apt., 24 by 10, f. f. c., s. l.	12	195 00	200 00	55, 185 00	56, 600 00	July 1, 1874	.....	69
r. p. o., 50 by 10, 26.8 by 9, f. f., d. l. to Kankakee, 55 m, s. l. residue, 310 miles, to July 7, 1874; r. p. o., 50 by 10, 45 by 10, f. f. c., d. l. to Kankakee, s. l. residue, from July 8, 1874.	12	195 00	180 00	73, 375 00	67, 900 00	July 8, 1874	55 miles at $235, formerly $220.	70
r. p. o., 40 by 9.6, 45 by 9.6, f. f. c., s. l.; r. a. apt., 8.10 by 5.7, f. f., d. l.	18	195 00	150 00	7, 761 00	5, 970 00	July 1, 1873	Part; residue $114, (147.)	71
r. p. o., 24 by 9.7, 25 by 9.7, f. f. c., s. l.	13	193 00	175 00	17, 949 00	16, 275 00	July 1, 1873	Part; residue $178, (83.)	72
113 by 10.6, f. f., s. l	94	190 00	150 00	141, 550 00	111, 750 00	July 1, 1873	Main route; branch $90, (184.)	73
r. p. o., 22.3½ by 6.11, f. f., s. l.	18	190 00	140 00	14, 260 00	10, 510 00	July 1, 1873	$1,150 for mail-messenger; formerly $850.	74
r. p. o., (say) 50 by 9.50 by 9.36 by 9. (average 45.4 by 9,) f. f. c., s. l.	18	190 00	160 00	19, 000 00	16, 000 00	July 1, 1873	r. p. o., with platforms, 58.6 by 9.	75
5 by 7, f. f., d. l...	18	187 50	100 00	3, 937 50	2 100 00	July 1, 1873	Part of 690, old.....	76
12 by 8, f. f., d. l...	43	187 50	175 00	4, 974 37	4. 642 75	July 1, 1873	Part; residue $150 ..	77
r. p. o., 24 by 9.7, f. f. c., s. l.	18	185 00	175 00	4, 532 50	4, 287 50	July 1, 1873	Part; residue $170, (92.)	78
r. p. o., 39.2 by 9.2, f. f. c., s. l.	12	185 00	200 00	37, 740 00	40, 800 00	July 1, 1873	.....	79
5 by 9.3, f. f., s. l.	12	182 00	180 81	12, 285 00	12, 204 67	July 1, 1873	Part; residue $157, (102.)	80
4 by 7.6, f. f., s. l., 2 agts. 58 m.	193	180 00	175 00	48, 915 00	47, 556 25	July 1, 1873	.....	81
r. p. o., 50 by 10, 26.8 by 9, f. f., d. l. to Kankakee, 55 miles, s. l. residue, 310 m.	12	180 00	115 35	65, 700 00	42. 100 0	July 1, 1873	55 miles at $220, from Oct. 29, 1873.	82
5 by 9.3, 13.7 by 9.7, f. f., s. l.	12	178 00	175 00	4, 628 00	4, 550 00	July 1, 1873	Part; residue $193, (72.)	83
r. a.....	18	175 00	.....	.....	.....	Apr. 16, 1873	New. Ordered Dec., 1873.	84
2 6 by 6.9, f. f. c., m. c., s. l.; r. a. in h. c.	28	175 00	150 00	8, 817 00	7, 567 00	July 1, 1873	$67 mail-messenger	85
by —, f. f., s. l..	6	175 00	125 00	9, 625 00	6, 875 00	July 1, 1873	Part; residue $225, (45.)	86
by 7, f. f., s. l....	9	175 00	125 00	20, 693 75	14, 781 25	July 1, 1873	.....	87
by —, f. f., s. l..	6	175 00	30 00	25, 004 00	4, 286 40	Aug. 1, 1873	To Aug. 2, 1873.....	88

F.—*Table showing the re-adjustment, under the act of March 3, 1873.*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour
						Miles.	*Pounds.*	
89	Vt...	452	402	White River Junction, Derby Line.	Connecticut and Passumpsic Rivers and Massawippi Valley, (late Connecticut and Passumpsic Rivers.)	114. 17	2, 809	
90	Ind...	12017	22017	Indianapolis, Peoria..	Indianapolis, Bloomington and Western.	212. 20	1, 770	
91	Mass.	602	602	Boston, South Berwick Junction.	Boston and Maine.....	75	2, 736	
92	Vt....	412	401	Burlington, Essex Junction, Saint Albans, Rouse's Point.	Central Vermont, (late Vermont Central and Vermont and Canada.)	31	3, 205	
93	Mass.	690	646	Fitchburgh, Shelburne Falls.	Vermont and Massachusetts...	69	2, 664	
94	Ala...	6605	.....	Memphis, Stevenson.	Memphis and Charleston	271. 50	2, 629	
95	Ohio..	9017	.....	Columbus, Indianapolis.	Columbus, Chicago and Indiana Central.	188	2, 965	
96	Mass.	627	622	Lawrence, Manchester.	Manchester and Lawrence.....	28	2, 213	
97	Mass.	689	645	Fitchburgh, Bellows Falls.	Cheshire and Ashuelot	64	2, 721	
98	Mass.	690	646	Shelburne Falls, Hoosac Tunnel.	Vermont and Massachusetts ..	18	2, 664	
99	Conn.	938	906	New Haven, Williamsburgh.	New Haven and Northampton.	83	2, 136	
100	Ill....	11426	23023	Decatur, Saint Louis.	Toledo, Wabash and Western..	112	2, 515	
101	Mass.	731	653	South Braintree Junction, Fall River.	Old Colony and Newport	34	2, 501	
102	Vt....	492	406	Bellows Falls, Rutland.	Central Vermont, (late Rutland and Burlington.)	52	2, 423	
103	Ky ...	9611	20008	Bowling Green, Guthrie.	Louisville and Nashville, (late Paducah and Gulf.)	51	2, 399	
104	Ill....	11415	23009	Peoria, Galesburgh ..	Chicago, Burlington and Quincy	54	1, 585	
105	Tenn.	10009	19009	Guthrie, Paris	Memphis, Clarksville and Louisville.	82¼	2, 237	
106	Mass.	663	637	Middleborough, Hyannis.	Cape Cod.....	47	2, 215	
107	Ohio..	9007	.....	Cleveland, Wellsville.	Cleveland and Pittsburgh.....	102. 36	2, 140	
108	Ala...	6612	.....	Mobile, Montgomery.	Mobile and Montgomery.....	179	2, 226	
109	N. Y..	1027	1213	Syracuse, Rochester..	New York Central and Hudson River.	104	2, 167	
110	Mass..	609	609	Boston, Plymouth....	Old Colony and Newport	38	2, 032	
111	Ohio..	9027	.....	Dayton, Toledo	Dayton and Michigan.....	142. 96	1, 987	
112	R. I ..	802	802	Providence, New London.	Stonington and Providence....	63. 75	1, 899	
113	Tenn.	10010	19010	Memphis, Paris	Louisville and Nashville and Great Southern, (late Louisville and Nashville.)	132. 50	1, 892	
114	Tenn	10004	19004	Nashville, Stevenson	Nashville, Chattanooga and Saint Louis, (formerly Nashville and Chattanooga.)	114	1, 872	
115	Mo....	10506	28006	Kansas City, Council Bluffs.	Kansas City, Saint Joseph and Council Bluffs.	203	1, 361	
116	Ill	11418	23021	Dubuque, Centralia ..	Illinois Central	344	1, 562	

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
r. p. o., 23 by 9, f. f., s. l.	6	175 00	100 00	19,979 75	11,417 00	July 1, 1873	.....	89
r. p. o. (say) 50 by 10, f. f. c., m. c., s. l.	12	175 00	90 00	37,135 09	19,098 00	July 1, 1873	r. p. o., with platforms, 56 by 10.	90
4 by 6.10, f. f., d. l.	12	172 00	150 00	12,900 00	11,250 00	July 1, 1873	.....	91
r. a. apt., 25 by 9.3, 13.7 by 9.7, f. f., s. l.	12	170 00	175 00	5,270 00	5,425 00	July 1, 1873	Part; residue $185, (78.)	92
15 by 7, f. f., d. l...	18	170 00	100 00	11,730 00	6,900 00	July 1, 1873	Part; residue $160 and $50, (98, 420.)	93
r. p. o., 23 by 9.10, f. f. c., s. l.	14	170 00	150 00	46,155 00	40,725 00	July 1, 1873	.....	94
12 by 9, f. f., s. l....	20	166 00	200 00	31,208 00	37,600 00	July 1, 1873	.....	95
17 by 7, 12 by 6.8, f. f., d. l.	18	163 00	100 00	4,564 00	2,800 00	July 1, 1873	.....	96
24 by s.c. fixtures, s. l.	18	160 00	117 18	10,240 00	7,500 00	July 1, 1873	.....	97
15 by 7, f. f., s. l...	12	160 00	100 00	2,880 00	1,800 00	July 1, 1873	Part; residue $170, $50, (93, 420.)	98
12 by 10, f. f., d. l..	12	160 00	75 00	13,280 00	7,225 00	July 1, 1873	Main route; branch $50, (397;) $1.000 mail-messenger formerly.	99
12 by —, f. f., s. l..	12	158 00	150 00	17,696 00	16,800 00	July 1, 1873	.....	100
2.6 by 9, f. f., m. c., d. l. to Middleborough, 25.07 miles; no r. a. residue.	12	158 00	50 00	6,372 00	1,700 00	July 1, 1873	$1,000 mail-messenger.	101
5 by 9.3, f. f., s. l..	12	157 00	100 00	8,164 00	5,200 00	July 1, 1873	Part; residue $182, (80.)	102
4.10 by 7.6, f. f., s. l.	19	156 00	150 00	7,956 00	7,650 00	July 1, 1873	.....	103
p. o., (say) 50 by 9.50 by 9.36 by 9, (average 45.4 by 9.) f. f. c., s. l.	12	155 00	130 00	8,370 00	7,020 00	Jan. 1, 1874	Weight in Nov., 1873; r. p. o., with platforms, 55.6 by 9, 55.6 by 9, 41 by 9.	104
3.7 by 10, f. f., s. l	13	153 00	100 00	12,622 50	8,250 00	July 1, 1873	.....	105
2.6 by 9, f. f., m. c., d. l. to Yarmouth Junction, 41.24 miles; no r. a. residue.	12	153 00	117 00	8,191 00	6,500 00	July 1, 1873	$1,000 mail-messenger.	106
5 by 9, f. f., s. l...	15	152 00	150 00	15,558 72	15,354 00	July 1, 1873	.....	107
13 by 8.8½, f. f., s. l.	7	150 00	160 00	26,850 00	28,640 00	July 1, 1873	.....	108
6 by 8.6, f. f. c. and b. c., (old report.)	21½*	150 00	125 00	15,600 00	13,000 00	July 1, 1873	.....	109
6 by 9, f. f., m. c., d. l. 11.28 miles; no r. a. residue.	23⅛*	150 00	125 00	6,595 00	5,645 00	July 1, 1873	$895 mail-messenger.	110
by s. f. f., s. l...	18	150 00	125 00	21,444 00	17,870 00	July 1, 1873	.....	111
by 6, f. f., s. l...	22½*	145 00	125 00	9,243 75	7,968 75	July 1, 1873	.....	112
6 by 7.6, f. f., s. l	13	145 00	150 00	19,212 50	19,875 00	July 1, 1873	.....	113
by 9.9, f. f., s. l	10½*	145 00	150 00	16,530 00	17,100 00	July 1, 1873	Part; residue $205, (63;) branch $50. (389.)	114
p. o., 24.10½ by 11½, 22.9 by 8.8, f. c., s. l.	12	143 00	140 00	29,029 00	28,420 00	July 1, 1873	Main route; branch $60, (310.)	115
o., 28 1 by 9.6. f., s. l.	12	140 00	100 00	48,160 00	34,400 00	July 1, 1873	.....	116

F.—*Table showing the re-adjustment, under the act of March* 3, 1873,

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	*Pounds.*	
117	Mo ...	10523a	28022	Road House, Mexico .	Chicago and Alton.....	90	1, 419	18
118	Me...	1	1	Augusta, Fairfield ...	Maine Central, (late Portland and Kennebeck.)	22	841	12
119	Me....	116	6	Portland, Canada Line.	Grand Trunk.....	165	1, 773	21
120	N. Y ..	1026	1227	Rome, Ogdensburgh .	Rome, Watertown and Ogdensburgh.	142	1, 760	30
121	Ind ...	12007	22007	New Albany, Indianapolis.	Jeffersonville, Madison and Indianapolis.	114	1, 671	22
122	Ala ...	6613	.....	Mobile, New Orleans.	New Orleans, Mobile and Texas	140	1, 600	20
123	Ill	11416	23018	Bloomington, Godfrey	Chicago and Alton	152	1, 205	24
124	Ill	11415	23009	Peoria, Galesburgh ..	Chicago, Burlington and Quincy	54	1, 053	36
125	Va...	4407	.....	Richmond, Greensborough.	Richmond and Danville	190. 50	1, 725	1-
126	N. C ..	5004	.....	Charlotte, Greensborough.	.....do.....	93	1, 519	1-
127	Mich .	12502	24001	Toledo, Detroit.....	Lake Shore and Michigan Southern.	64. 75	2, 477	2-
128	Vt ...	521	410	West Concord, Hyde Park.	Portland and Ogdensburgh....	58. 93	2, 301	3-
129	N. Y ..	1524	1279	Chatham Village, Rutland.	Central Vermont, (late Harlem Extension.)	111. 30	1, 68-	1-
130	N. Y ..	1022	1242	Rouse's Point, Ogdensburgh.	Central Vermont, (late Ogdensburgh and Lake Champlain.)	119	1, 624	2-
131	N. H ..	253	252	Concord, Wells River	Boston, Concord and Montreal	94	1, 56-	1-
132	Wis ..	13004	25001	Milwaukee, North McGregor.	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Paint Paul.)	197. 20	1, 541	1-
133	Cal ...	14703	46003	Roseville Junction, Tehama.	California and Oregon	105	1, 512	2-
134	N. Y ..	1017	1259	Troy, North Adams..	Troy and Boston	50	1, 420	1-
135	Ohio ..	9015	.....	Columbus, Delaware.	Cleveland, Columbus, Cincinnati and Indianapolis.	24. 75	1, 40-	2-
136	Mich ..	12515	24015	Bay City, Monroe	Flint and Père Marquette....	132	1, 399	2-
137	Conn.	926	902	New London, Palmer	Central Vermont, (late Vermont Central.)	65	1, 30-	2-
138	N. H ..	255	254	Concord, Claremont Junction.	Concord and Claremont.....	54. 99	1, 207	2-
139	Pa	2410	.....	Allentown, Mauch Chunk.	Lehigh Valley.....	29. 50	1, 100	1-
140	Me....	115	5	Brunswick, Bath.....	Maine Central, (late Portland and Kennebeck.)	9	1, 079	1-
141	Ohio ..	9029	.....	Hamilton, Richmond	Cincinnati, Hamilton and Dayton.	45. 10	1, 363	3-
142	Mass..	670	638	Yarmouthport, Wellfleet.	Cape Cod.....	31	1, 172	3-
143	Ala ...	6604	.....	Montgomery, Calera .	South and North Alabama.....	63. 80	1, 332	3-
144	Ohio ..	9005	.....	Hudson, Columbus...	Cleveland, Mount Vernon and Delaware.	145. 88	1, 342	3-
145	Pa	2410	.....	Mauch Chunk, Wilkesbarre.	Lehigh Valley..... ...	55	1, 100	2-
146	Del ...	3401	.....	Wilmington, Delmar.	Philadelphia, Wilmington and Baltimore.	96. 92	1, 100	1-
147	Pa	2422	.....	Williamsport, Erie...	Pennsylvania	247. 80	1, 133	1-
148	Tenn	10008	19008	Nashville, Guthrie ...	Saint Louis and Southeastern, Consolidated, (formerly Edgefield and Kentucky.)	48	1, 292	3-
149	S. C...	5606	.....	Charleston, Savannah	Savannah and Charleston.....	104	1, 229	2-

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
r. p. o., 32 by 10, f. f. c., m. c., s. l.	6	140 00	50 00	12, 600 00	4, 500 00	July 1, 1873	.....	117
r. p. o., 42 by 9, d. l.; r. a. apt., 16 by —, s. l.	18	140 00	75 00	3, 080 00	1, 650 00	July 1, 1873	Part; residue $90, (181.)	118
23 by 8, f. f., s. l...	10½*	138 00	100 00	22, 770 00	17, 700 00	July 1, 1873	48 miles formerly at $125.	119
23 by 9, 23.6 by 7, fixtures, s. l.	15	138 00	115 00	19, 596 00	16, 330 00	July 1, 1873	Main route; branch $62.50, (285.)	120
13 by 7.4, f. f., s. l.	18	134 00	150 00	15, 276 00	17, 100 00	July 1, 1873	.....	121
17 by 7, f. f., s. l. (space in through mail-car, 18 by 5.)	14	130 00	110 00	18, 200 00	15, 400 00	July 1, 1873	.....	122
r. p. o., 32 by 10, f. f. c., m. c., s. l. 111.4 miles; r. a. apt., 24 by 10, f. f. c., s. l. 40.6 m.	12	130 00	100 00	18, 948 00	15, 200 00	July 1, 1873	40.6 miles at $110....	123
r. p. o., (say) 50 by 9, 50 by 9, 36 by 9, (average 45.4 by 9,) f. f. c., s. l.	12	130 00	65 00	7, 020 00	3, 510 00	July 1, 1873	Weight in Oct., 1873; r. p. o., with platforms, 55.6 by 9, 55.6 by 9, 41 by 9.	124
18.4 by 8.6, f. f., s. l	16*	128 00	125 00	24, 384 00	23, 812 50	July 1, 1873	.....	125
21 by 8, f. f., s. l...	14	126 00	125 00	11, 718 00	11, 625 00	July 1, 1873	Part; residue $75, (245.)	126
13 by 9, f. f., s. l...	6	125 00	100 00	8, 093 75	6, 475 00	July 1, 1873	.....	127
15 by 6.6, f. f., s. l.	6	125 00	50 00	7, 366 25	2, 946 50	July 1, 1873	.....	128
17.6 by 6.6, f. f., s. l	6	125 00	60 00	13, 912 00	6, 678 00	July 1, 1873	Main route; branch $60.	129
13.8 by 7.3.....	9*	125 00	90 00	14, 875 00	10, 710 00	July 1, 1873	.....	130
17 by 6.8, f. f., s. l.	13⅔*	125 00	100 00	11, 750 00	9, 300 00	July 1, 1873	1 mile increase.....	131
23 by 10, f. f., s. l..	12	125 00	150 00	24, 650 00	29, 580 00	July 1, 1873	.....	132
12.9 by 8.10, f. f. c., s. l.	7	125 00	75 00	13, 125 00	7, 875 00	July 1, 1873	.....	133
15.2 by 6.8, f. f., s. l	20½*	121 00	125 00	6, 550 00	6, 250 00	July 1, 1873	Main route; branch $50, (370.) $500 mail-messenger.	134
b. c.; no r. a	12	120 00	125 00	2, 970 00	3, 093 75	July 1, 1873	.....	135
21 by 8.10½, f. f., s. l	14½*	120 00	75 00	15, 840 00	9, 900 00	July 1, 1873	.....	136
11.5 by 5.8, f. f., s. l	20½*	120 00	100 00	7, 800 00	5, 625 00	July 1, 1873	35 miles formerly at $75.	137
12 by 6.8, f. f., d. l.	12	120 00	57 69	6, 598 80	3, 172 37	July 1, 1873	.....	138
2 by 8.6, f. f., 2½ l	18	120 00	100 00	3, 540 00	2, 950 00	July 1, 1873	Part; residue $115, (145,) $105, (160.)	139
2 by —, t. l.....	18	120 00	113 35	1, 080 00	1, 020 15	July 1, 1873	Branch; main route $210, (55.)	140
2 by 8, f. f., s. l...	12	118 00	110 00	5, 321 80	4, 961 00	July 1, 1873	.....	141
2.6 by 9, f. f., d. l.	12	118 00	100 00	7, 658 00	5, 800 00	July 1, 1873	$4,000 mail-messenger; formerly $2,700.	142
4.10 by 7.6, f. f., s. l	12	117 50	100 00	6, 496 50	6, 380 00	July 1, 1873	Part; residue $75 ...	143
9 by 8.6, f. f., s. l.	9½*	117 00	55 00	17, 067 96	5, 537 40	July 1, 1873	.....	144
2 by 8.6, f. f., d. l.	12	115 00	100 00	6, 325 00	5, 500 00	July 1, 1873	Part; residue $120, (139,) $105, (160.)	145
4 by 9, f. f., d. l...	12	115 00	109 59	11, 145 80	10, 621 25	July 1, 1873	.....	146
10 by 5.7, f. f., d. l. 25.1 m., s. l. 157.2 m., t. l. 65.5 m.	17*	114 00	100 00	28, 249 20	24, 780 00	July 1, 1873	Part; residue $195, (71.)	147
2 by 6.6, f. f., s. l. (See remark.)	6	112 00	90 00	5, 376 00	4, 320 00	July 1, 1873	Trips 6 at weighing; usually 12.	148
by 6, f. f., s. l....	13	111 00	125 00	11, 544 00	13, 000 00	July 1, 1873	.....	149

F.—*Table showing the re-adjustment, under the act of March 3, 1873,*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	*Pounds.*	
150	Ill....	11900	23032	East Saint Louis, Evansville.	Saint Louis and Southeastern, Consolidated, (late Saint Louis and Southeastern.)	164. 75	1, 211	23
151	N. J..	2110	.....	Philadelphia, Bridgeton.	West Jersey	38. 40	1, 206	25
152	Pa....	2404	.....	Philadelphia, Bethlehem.	North Pennsylvania.....	54. 60	1, 196	30
153	R. I...	801	801	Providence, Worcester.	Providence and Worcester	44	1, 044	30
154	Me	.....	221	Salmon Falls, Portland.	Boston and Maine.....	44. 18	1, 017	30
155	Conn .	945	910	South Norwalk, Danbury.	Danbury and Norwalk	23. 50	1, 097	22
156	Ky ...	9606	20002	Covington, Lexington	Kentucky Central.....	99	984	23
157	Ky ...	9612*a*	20010	Evansville, Guthrie..	Saint Louis and Southeastern, Consolidated, (late Saint Louis and Southeastern.)	110. 66	1, 186	23
157*a*	Mass .	607	607	Boston, Southbridge .	Boston, Hartford and Erie.....	70	969	28
157*b*	Iowa .	11007	27021	Dubuque, Sioux City.	Illinois Central.....	337. 12	1, 156	22
158	Mass .	683	643	Worcester, Nashua ..	Worcester and Nashua.....	46. 25	1, 142	22
159	Mich .	12507	24006	Detroit, Grand Haven	Detroit and Milwaukee	190	1, 135	23
160	Pa....	2410	.....	Wilkesbarre, Waverly	Lehigh Valley.....	105	1, 100	23
161	Mass .	696	647	Palmer, Miller's Falls	Central Vermont, (late New London Northern.)	35	1, 490	.....
162	Md ...	3514	.....	Baltimore, Washington.	Baltimore and Potomac.....	42. 60	1, 440	25
163	Vt....	523	522	Richford, Newport...	Missisquoi and Clyde Rivers ..	31. 38	1, 295	30
164	Pa....	2442	.....	Pittsburgh, Oil City .	Allegheny Valley	132. 71	1, 089	22
165	Mass .	608	608	Boston, Providence ..	Boston and Providence.....	44	1, 059	23
166	Md ...	3518	.....	Saint Denis, Point of Rocks.	Baltimore and Ohio.....	60	1, 045	23
167	Ala...	6604	.....	Montgomery, Calera .	South and North Alabama	63. 80	1, 004	25
168	Ind ...	12004	22004	Indianapolis, Peru ...	Indianapolis, Peru and Chicago	78	986	30
169	Ohio ..	9003	.....	Rochester, Bellaire...	Cleveland and Pittsburgh	68. 75	984	23
170	Ind ...	12012	22012	Evansville, Terre Haute.	Evansville and Crawfordsville.	110	945	23
171	Mass .	677	641	Taunton, Mansfield Junction.	New Bedford, (late Taunton Branch.)	12	936	21
172	N. Y..	1029	1256	Syracuse, Oswego	Oswego and Syracuse.....	35. 50	867	25
173	Wis ..	13014	25014	Elroy, Saint Paul	West Wisconsin.....	192. 40	855	23
174	Me ...	204	13	Bath, Rockland	Knox and Lincoln	50	810	28
175	Ohio ..	9012	.....	Xenia, Dayton	Pittsburgh, Cincinnati and Saint Louis.	17	894	20
176	Ky ...	9607	20003	La Grange, Lexington	Louisville, Cincinnati and Lexington.	67	850	30
177	Cal ..	14707	46006	Sacramento, San Francisco.	California Pacific.....	83	829	20
178	Pa....	2417	.....	Scranton, Northumberland.	Lackawanna and Bloomsburgh	80	857	28
179	Minn .	13504	26009	North McGregor, Minneapolis.	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	215. 70	854	25
180	N. Y..	1006	1233	New York, Greenport	Long Island.....	100. 50	852	18
181	Me ...	1	1	Fairfield, Skowhegan	Maine Central, (late Portland and Kennebeck.)	17	941	22
182	Ohio ..	9022	.....	Bluff City, Naples ...	Toledo, Wabash and Western .	4	829	16
183	Ohio ..	9038	.....	Salamanca, Dayton...	Atlantic and Great Western ..	389. 55	827	24
184	Kans .	14001	33001	Leavenworth, Lawrence.	Kansas Pacific	33	827	20
185	N. H..	331	261	Groveton Junction, Wells River.	Boston, Concord and Montreal.	53. 10	811	25
186	Va....	4406	.....	Richmond, Hinton ...	Chesapeake and Ohio.....	272. 58	810	22
187	Mass .	678	642	Taunton, New Bedford.	New Bedford, (late New Bedford and Taunton.)	20. 50	801	23

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
12 by 6.6, f. f., s. l.	12	110 00	105 00	18, 122 50	17, 298 75	July 1, 1873		150
10.10 by 6.5, 10.8 by 6.5, f. f., s. l.	12	110 00	100 00	4, 824 00	4, 440 00	July 1, 1873	$600 mail-messenger service.	151
10.6 by 6.6, f. f., s. l	45½*	110 00	100 00	6, 006 00	5, 460 00	July 1, 1873	Part; residue $50, (373.)	152
14.10 by 6.1, 13.6 by 6.2, f. f. c., d. l.	18	110 00	75 00	6, 340 00	4, 800 00	July 1, 1873	$1,500 side service...	153
13 by 6.10, f. f., d. l	12	110 00	.....	.....	.....	July 1, 1873	New; ordered July, 1874.	154
10 by 6, f. f., d. l...	24½*	110 00	85 11	2, 585 00	2, 000 00	July 1, 1873	Main route; branch $50, (425.)	155
12 by 8, f. f., d. l...	12	109 00	100 00	10, 791 00	9, 900 00	July 1, 1873	Part; residue $75, (225.)	156
12 by 6.6, f. f., s. l. (See remark.)	6	108 00	75 00	11, 951 28	8, 299 50	July 1, 1873	Trips 6 at weighing; usually 12.	157
12.10 by 6.10, 12.7 by 6.10, f. f., d. l.	12	108 00	90 00	7, 560 00	6, 300 00	July 1, 1873	.....	157a
19.1½ by 9.2, f. f., s. l	12	107 00	100 00	35, 001 84	32, 712 00	July 1, 1873	.....	157b
12.4 by 6.6, f. f., s. l	18	107 00	100 00	4, 948 75	4, 625 00	July 1, 1873	.....	158
18 by 9, fixtures, s. l	15*	105 00	100 00	19, 950 00	19, 000 00	July 1, 1873	.....	159
22 by 8.6, f. f., s. l.	6	105 00	100 00	11, 025 00	10, 500 00	July 1, 1873	Part; residue $120, (139,) $115, (145.)	160
11.5 by 5.8, f. f., s. l	6	100 00	75 00	3, 500 00	2, 625 00	July 1, 1873	.....	161
14.6 by 8.6, f. f., s. l	6	100 00	.....	.....	.....	July 1, 1872	New; ordered April, 1874.	162
13.5 by 7.4, f. f., s. l	6	100 00	50 00	3, 138 00	1, 569 00	July 1, 1873	.....	163
14.8 by 8.8, f. f., s. l	18	100 00	85 00	13, 271 00	11, 280 35	July 1, 1873	.....	164
No apt.; no r. s...	20½*	100 00	200 00	4, 400 00	8, 800 00	July 1, 1873	.....	165
17 by 8.7½, f. f., s. l	6	100 00	50 00	6, 000 00	3, 000 00	July 1, 1873	.....	166
13.7 by 7.5, fixtures, s. l.	7	100 00	50 00	6, 380 00	3, 190 00	May 17, 1873	Part; residue $75, (247.)	167
2 by 8, f. f., s. l ...	18	100 00	150 00	8, 400 00	10, 500 00	July 1, 1874	$600 m. m.; 24 miles formerly at $75.	168
3 by 9, f. f., s. l...	18	100 00	125 00	6, 875 00	8, 593 75	July 1, 1873	.....	169
2.3 by 7.6, f. f., s. l	12	100 00	85 00	11, 000 00	9, 350 00	April 1, 1873	Part; residue $50...	170
No apt.; no r. s...	36½*	100 00	150 00	1, 500 00	1, 800 00	July 1, 1873	$300 mail-messenger service.	171
1 by 6, fixtures, d. l	18	100 00	75 00	3, 550 00	2, 662 50	July 1, 1873	.....	172
0 by 8, f. f. c., s. l	12	100 00	50 00	19, 840 00	9, 920 00	July 1, 1873	Main route; branch $30, (464.)	173
4.6 by 7.2, 13 by 6.2, f. f., d. l.	12	100 00	85 00	5, 000 00	4, 250 00	July 1, 1873	One mile increase...	174
5.6 by 8.6, f. f., s. l	24	94 00	85 00	1, 598 00	1, 445 00	July 1, 1873	.....	175
0 by 7.3, f. f., s. l.	12	92 00	100 00	6, 164 00	6, 700 00	July 1, 1873	.....	176
0 by 8.10, f. f., s. l.	7	91 00	150 00	7, 553 00	12, 450 00	July 1, 1873	Main route; branch $50, (416.)	177
by 6.8, f. f., s. l.	7½*	90 00	75 00	7, 200 00	6, 000 00	July 1, 1873	.....	178
by 10.3, f. f., s. l.	6½*	90 00	150 00	19, 413 00	32, 355 00	July 1, 1873	.....	179
by 8, 10.4 by 8.3, f. f., s. l.	8*	90 00	100 00	11, 045 00	12, 050 00	July 1, 1873	$2,000 m. m. service at New York.	180
by —, s. l	6	90 00	75 00	1, 530 00	1, 275 00	July 1, 1873	Part; residue $140, (118.)	181
by —, f. f., s. l..	12	90 00	55 00	360 00	220 00	July 1, 1873	Branch; main route $273, (21.) $255, (28.)	182
.6 by —, f. f., s. l..	16	90 00	80 00	35, 059 50	32, 994 00	July 1, 1873	61 miles formerly at $110.	183
.3 by 10.6, f. f., s. l	13	90 00	85 00	2, 970 00	2, 805 00	July 1, 1873	Branch; main route $190, (73.)	184
by 6.8, f. f., s. l.	104*	90 00	50 00	4, 779 00	2, 655 00	July 1, 1873	.....	185
7 by 6.10, f. f., s. l	12	90 00	100 00	24, 532 20	27, 258 00	July 1, 1873	.....	186
r. s. Locked oom in b. c.	27*	90 00	85 00	2, 457 50	2, 355 00	July 1, 1873	$612.50 mail-messenger service.	187

F.—*Table showing the re-adjustment, under the act of March 3, 1873*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails which dis-tances per day. Miles per hour.
						Miles.	*Pounds.*
188	Wis ..	13006	25003	Milwaukee, Berlin	Chicago, Milwaukee and Saint Paul. (late Milwaukee and Saint Paul.)	94. 80	790
189	Ill	11412	23016	Bureau Junction, Peoria.	Chicago, Rock Island and Pacific.	47	785
190	Mass .	688	644	Sterling Junction, Fitchburgh.	Boston, Clinton and Fitchburgh	14	691
191	Mass .	640	631	South Framingham, Pratt's Junction.	.....do.....	29	667
192	Tenn .	10006	19006	Nashville, Decatur...	Nashville and Decatur	122½	766
193	Mass .	745	680	Worcester, Gardner..	Boston, Barre and Gardner	27	757
194	Ohio..	9040	.....	Columbus, Athens'...	Columbus and Hocking Valley .	77. 40	755
195	Ill	11903	23025	Hannibal, Naples	Toledo, Wabash and Western .	45. 50	733
196	Conn .	943	909	Bridgeport, Pittsfield	Housatonic	110	734
197	Mich..	12521	24021	New Buffalo, Pent Water.	Chicago and Michigan Lake Shore.	165. 50	727
198	Vt	508	408	Saint Albans, Canada Line.	Central Vermont, (late Vermont and Canada.)	17	815
199	Nebr..	14483	34005	Nebraska City, Seward.	Midland Pacific	84. 10	732
200	Mich..	12950	24031	Fort Howard, Esconawba.	Chicago and Northwestern	114. 60	751
201	Mich..	12846	24029	Esconawba, Negaunee	.....do.....	62. 22	710
202	Conn ..	925	901	Norwich, Worcester .	Boston, Hartford and Erie.....	60	710
203	Iowa..	11011	27029	Missouri Valley, Sioux City.	Sioux City and Pacific.....	76	704
204	Pa	2464	.....	Pittsburgh, Cumberland.	Pittsburgh and Connellsville ..	147. 60	698
205	Pa	2419	.....	Binghamton, New Hampton.	Delaware, Lackawanna and Western.	144. 50	665
206	Pa	2416	.....	Hazle Creek Bridge, Hazleton, Lumber-Yard, Ebervale.	Lehigh Valley.....	13. 80	517
207	Iowa..	11001	27019	Keokuk, Des Moines	Keokuk and Des Moines.....	162	624
208	Mich..	12508	24007	Detroit, Port Huron..	Grand Trunk.....	64. 50	686
209	Wis...	13396	25016	Milwaukee, Menasha.	Wisconsin Central, operated by Phillips & Colby Construction Company.	100	652
210	N. J.	1451a 2132	2254	New York, Middletown.	New Jersey Midland	88	659
211	N. Y ..	1016	1212	Troy, Schenectady ...	New York Central and Hudson River.	22	641
212	Pa	2408	.....	Chester, Port Deposit	Philadelphia and Baltimore Central.	59. 25	639
213	Utah..	16633	41001	Salt Lake City, Ogden	Utah Central.....	36. 50	632
214	N. Y ..	1032	1205	Rochester, Avon	Erie.....	18	646
215	N. Y ..	1228	1229	Utica, Norwich	Delaware, Lackawanna and Western.	54. 50	637
216	Cal. ..	14876	46010	Lathrop, Goshen	Central Pacific	144. 91	633
217	Mo....	10502	28002	Bismarck, Argenta ..	Saint Louis and Iron Mountain and Cairo and Fulton.	262	627
218	N. J...	2116	.....	Trenton, Intersection with Delaware, Lackawanna and Western Railroad.	Pennsylvania	68. 70	617
219	Cal ...	14702	46002	San Francisco, Salina.	Southern Pacific	118	613
220	Conn..	955	911	Waterbury, Providence.	Hartford, Providence and Fishkill.	122. 50	612
221	Ill	11429	23005	Sterling, Alton Junction.	Rockford, Rock Island and Saint Louis.	270. 80	604
222	N. Y ..	1040	1230	Owego, Ithaca	Delaware, Lackawanna and Western.	35	601
223	S. C...	5605	.....	Branchville, Charleston.	South Carolina	62	621
224	Tenn .	10007	19007	Nashville, Hickman..	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga.)	170. 82	577

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
2.6 by 10.3, f.f., s. l	12	90 00	75 00	8, 532 00	7, 110 00	July 1, 1873	.....	188
4 by 10, f. f., s. l..	12	90 00	75 00	4, 230 00	3, 525 00	July 1, 1873	.....	189
2 by 6.6, f. f., d. l. 9 miles.	12	90 00	75 00	1, 260 00	1, 050 00	July 1, 1873	.....	190
2 by 6.6, f. f., d. l..	18	90 00	75 00	2, 610 00	2, 175 00	July 1, 1873	.....	191
5 by 7.8, f. f., s. l..	12	88 00	75 00	10, 765 33	9, 175 00	July 1, 1873	.....	192
0 by —, fixtures, d. l.	12	87 50	50 00	2, 362 50	1, 350 00	July 1, 1873	.....	193
4 by 10, f. f., s. l..	12	*87 50	75 00	6, 772 50	5, 805 00	July 1, 1873	Main route; branch $40.	194
2 by —, f. f., s. l..	6	87 50	.....	.....	.....	July 1, 1873	New; ordered April, 1874. Main route; branch $50, (393.)	195
1.6 by 6, f. f., s. l. 79 miles, d. l. 31 m	13½*	86 00	80 00	9, 770 00	8, 800 00	July 1, 1873	31 miles at $96. Main route; branches $50, (401,) $30, (463.)	196
2.8 by 7, fixtures, s. l.	14½*	86 00	50 00	14, 233 00	8, 275 00	July 1, 1873	Main route; branch $50.	197
7 by 9.3, f. f., s. l.	6	85 00	100 00	1, 445 00	1, 700 00	July 1, 1873	.....	198
2 by 7, f. f., s. l..	6	85 00	50 00	7, 148 50	4, 205 00	July 1, 1873	.....	199
8 by 10, f. f., s. l..	6	85 00	.....	.....	.....	Dec. 1, 1872	New; ordered January, 1874.	200
8 by 10, f. f., s. l..	6	85 00	75 00	5, 288 70	4, 666 50	July 1, 1873	.....	201
2 by 7, f. f., s. l...	15*	85 00	75 00	5, 646 00	5, 046 00	July 1, 1873	$546 mail-messenger.	202
0 by —, f. f., s. l..	6	85 00	75 00	6, 460 00	5, 700 00	July 1, 1873	Part; residue $50...	203
4.6 by 8.6, f. f., m. c., s. l.	12	85 00	50 00	12, 563 00	7, 390 00	July 1, 1873	Main route; branch $54, (347.)	204
9 by 7, f. f., s. l...	9½*	85 00	80 00	12, 282 50	11, 560 00	July 1, 1873	.....	205
0 by 7, f. f., d. l...	13	85 00	75 00	1, 173 00	1, 035 00	July 1, 1873	.....	206
6.6 by 9, f. f., s. l..	12	84 00	75 00	13, 608 00	12, 150 00	Apr. 1, 1874	.....	207
2 by 7.2, f. f. c., s. l.	12	83 00	100 00	5, 353 50	6, 425 00	July 1, 1873	¼ mile increase.....	208
4.2 by 7.10, f. f., s. l	6	83 00	50 00	8, 300 00	5, 000 00	July 1, 1873	.....	209
8 by 7, f. f., s. l...	6	83 00	50 00	7, 304 00	4, 400 00	Jan. 1, 1874	Consolidation; ordered July, 1874	210
c.....	18	82 00	75 00	1, 804 00	1, 650 00	July 1, 1873	.....	211
car, d. l.....	12	82 00	75 00	4, 858 50	4, 443 75	July 1, 1873	.....	212
o r. a.....	14	80 00	50 00	2, 920 00	1, 825 00	July 1, 1873	.....	213
c.; no r. a.....	12	80 00	75 00	1, 440 00	1, 350 00	July 1, 1873	.....	214
9.3 by 6.7, f. f., s. l	12	80 00	50 00	4, 360 00	2, 425 00	July 1, 1873	6 miles increase.....	215
4.7 by 8.10, f. f., s. l	6	80 00	50 00	11, 592 80	7, 245 50	July 1, 1873	.....	216
0.4 by 6.10, s. l...	6	80 00	50 00	20, 960 00	13, 100 00	July 1, 1873	Branch; main route $100.	217
.6 by 6, f. f., s. l..	20½*	80 00	75 00	5, 496 00	5, 152 50	July 1, 1873	.....	218
1 by 9, 11.6 by 9, f. f., s. l.	7	80 00	100 00	9, 440 00	11, 800 00	July 1, 1873	Main route; branch $50, (422.)	219
4.2 by 6.6, f. f., s. l.	22½*	80 00	100 00	9, 800 00	12, 250 00	July 1, 1873	.....	220
0.11 by 9.4, f. f., s. l	10½*	80 00	90 00	21, 664 00	24, 372 00	July 1, 1874	.....	221
by 7.8, f. f., s. l..	12	80 00	85 71	2, 800 00	3, 000 00	July 1, 1873	.....	222
6.2 by 8.2, f. f., d. l	13	80 00	75 00	4, 960 00	4, 650 00	July 1, 1873	Branch; main route $70, (259.)	223
2 by 9, f. f., s. l...	12½*	78 00	75 00	13, 323 96	12, 750 00	July 1, 1873	0.82 mile increase...	224

F.—*Table showing the re-adjustment, under the act of March 3, 1873,*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	*Pounds.*	
225	Minn	13505	26004	Saint Paul, Sioux City	Saint Paul and Sioux City	245	545	20
226	Ky	9606	20002	Lexington, Nicholasville.	Kentucky Central	13	984	23
227	N. Y	1030	1214	Canandaigua, Niagara Falls.	New York Central and Hudson River.	97	711	30
228	Nebr	14479	34004	Omaha, Concord	Burlington and Missouri River in Nebraska.	21. 50	690	20
229	Iowa	11012	27001	Burlington, Plymouth	Burlington, Cedar Rapids and Minnesota.	228	663	20
230	Mich	12511	24010	Jackson, Grand Rapids.	Michigan Central	94. 50	588	25
231	Mich	12505	24004	White Pigeon, Kalamazoo.	Lake Shore and Michigan Southern.	38. 33	572	22
232	Wis	13013	25010	Caledonia, Elroy	Chicago and Northwestern	135. 45	562	24
233	Kans	14143	33007	Atchison, Sargent	Atchison, Topeka and Santa Fé	470. 25	562	20
234	Vt	520	409	Saint Albans, Richford.	Central Vermont, (late Vermont and Canada.)	28. 66	556	16.
235	Colo	17051	38003	Hughes Station, Erie	Denver and Boulder Valley	15	550	15
236	Minn	13508	26006	Saint Paul, Du Luth	Lake Superior and Mississippi	156	543	20
237	N. Y	1036	1215	Buffalo, Lockport	New York Central and Hudson River.	22	542	30
238	Mo	10505	28005	Palmyra, Hannibal	Hannibal and Saint Joseph	15	532	22
239	Ind	12009	22009	Richmond, Chicago	Pittsburgh, Cincinnati and Saint Louis.	225. 50	529	30
240	Ill	11432	23011	Burlington, Quincy	Chicago, Burlington and Quincy	71. 85	526	21½
241	Ill	14414	23038	Peoria, Jacksonville	Peoria, Pekin and Jacksonville	87. 40	525	24
242	Pa	9412	.....	Penn Haven Junction, Audenreid.	Lehigh Valley	17. 50	521	20
243	Mo	10507	28007	Moberly, Ottumwa	Saint Louis, Kansas City and Northern, (late North Missouri.)	131	515	22
244	Cal	14945	46013	Goshen, Tipton	Southern Pacific	21	507	20
245	N. C	5004	.....	Greensborough, Goldsborough.	Richmond and Danville	130	502	18
246	Ind	12013	22013	State Line, Logansport.	Pittsburgh, Cincinnati and Saint Louis.	61	49	24
247	Ala	6604	.....	Calera, Decatur	South and North Alabama	119. 05	492	25
248	Nebr	14451	34002	Plattsmouth, Kearney Junction.	Burlington and Missouri River, in Nebraska.	191	483	20
249	Ga	6017	.....	Atlanta, Charlotte	Atlanta and Richmond Air-Line	259. 10	475	22
250	Ill	11917	23037	Vincennes, Cairo	Cairo and Vincennes	156½	467	23
251	Wis	13018	25017	Menasha, Stevens Point.	Wisconsin Central, operated by Phillips & Colby Construction Company.	65. 27	451	24
252	Wis	13003	25013	Racine, Rock Island Junction.	Western Union	189. 40	450	20
253	Colo	17064	38001	Denver, Pueblo	Denver and Rio Grande	119	433	17
254	Ga	6015	.....	Fort Valley, Eufaula	Southwestern	115½	432	20
255	Kans	14143	33007	Newton, Wichita	Atchison, Topeka and Santa Fé.	96	432	17
256	Mich	12512	24011	Kalamazoo, Grand Rapids.	Lake Shore and Michigan Southern.	58½	423	21
257	Pa	2427	.....	Lancaster, Middletown.	Pennsylvania	31. 20	404	25
258	S. C	5605	.....	Kingsville, Columbia	South Carolina	97	390	15
259	S. C	5605	.....	Kingsville, Augusta	....do....	119	374	15
260	Mich	12539a	24013	Detroit, Bay City	Detroit and Bay City	111. 13	422	25
261	Minn	13507	26002	Saint Paul, Sauk Rapids.	Saint Paul and Pacific	78	414	15

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
20.3 by 9.3, 22.4 by 9.3, f. f., s. l.	8½*	77 25	50 00	18, 926 25	14, 418 75	July 1, 1873	86¼ miles formerly at $75.	225
12 by 8, f. f., s. l.	6	75 00	50 00	975 00	650 00	July 1, 1874	Part; residue $109, (156.)	226
14.6 by 8.6, 11 by 9, f. f., s. l., (old report.)	6	75 00	50 00	7, 275 00	4, 850 00	July 1, 1873		227
18.6 by 7, f. f., s. l.	6	75 00	50 00	1, 925 50	1, 338 00	July 1, 1873	1 mile increase; $313 ferriage.	228
12 by 9.3½, f. f., s. l.	6½*	75 00	55 00	17, 100 00	12, 540 00	July 1, 1873		229
14 by 10, f. f., s. l.	6	75 00	50 00	7, 087 50	4, 725 00	July 1, 1873		230
17.3 by 9, f. f., s. l.	12	75 00	50 00	2, 874 75	1, 916 50	July 1, 1873		231
42.6 by 10, f. f. c., s. l	6	75 00	100 00	10, 158 75	13, 545 00	July 1, 1873		232
14 by 9, 10 by 7, 11 by 7, f. f., s. l.	6	75 00	100 00	35, 268 75	41, 075 00	July 1, 1873	Main route; branch $70, (255;) 119 miles formerly at $50.	233
9.6 by 7.9, f. f., s. l.	6	75 00	50 00	2, 149 00	1, 433 00	July 1, 1873		234
— by —, f. f., s. l.	6	75 00	50 00	1, 125 00	750 00	July 1, 1873	Weight reported to Boulder City, 27 miles.	235
30 by 10, f. f., s. l.	7½*	75 00	50 00	11, 700 00	7, 800 00	July 1, 1873		236
b. c	12	75 00	50 00	1, 650 00	1, 100 00	July 1, 1873		237
b. c.; no r. s.	19	75 00	175 00	1, 125 00	2, 625 00	July 1, 1873	Branch; main route $237.50, (36.)	238
12 by 8.6, f. f., s. l.	6	75 00	150 00	16, 912 50	33, 825 00	July 1, 1873		239
10 by 7, f. f., s. l.	6	75 00	50 00	5, 388 75	3, 592 50	July 1, 1873		240
13 by 8, f. f., s. l. (See remark.)	6½*	75 00	55 00	6, 555 00	4, 807 00	Apr. 1, 1874	In March, 1874. Additional trips for portion of the year.	241
10 by 7, f. f., s. l. 8 miles.	12	75 00	60 00	1, 312 50	1, 050 00	July 1, 1873		242
22 by 7.6, f. f., s. l.	12	75 00	.....	.....	.....	July 1, 1873	New; ordered April, 1874.	243
14.7 by 8.10, f. f., s. l.	7	75 00	50 00	1, 575 00	1, 050 00	July 1, 1873		244
21 by 8, f. f., s. l.	7	75 00	82 11	9, 750 00	10, 675 00	July 1, 1873	Part; residue $126, (126.)	245
24 by 8, f. f. c., s. l.	6	75 00	50 00	4, 575 00	3, 050 00	July 1, 1873		246
13.7 by 7.5, fixtures, s. l.	7	75 00	50 00	8, 928 75	5, 952 50	May 17, 1873	Part; residue $100, (167.)	247
18.6 by 7, f. f., s. l.	6	70 00	50 00	13, 370 00	9, 550 00	July 1, 1873		248
22.6 by 10, f. f., s. l.	7	70 00	.....	.....	.....	July 1, 1873	New; ordered May, 1874.	249
10 by 6, f. f., s. l.	6	70 00	.....	.....	.....	July 1, 1873	New; ordered April, 1874.	250
14.2 by 7.10, f. f., s. l.	6	70 00	60 00	4, 568 90	3, 916 20	July 1, 1874		251
23 by 10, f. f., s. l.	6	70 00	50 00	13, 258 00	9, 470 00	July 1, 1873		252
9.5 by 5.10, f. f., s. l.	7	70 00	50 00	8, 330 00	5, 950 00	July 1, 1873		253
14 by 8.9, f. f., s. l.	13	70 00	75 00	8, 096 66	8, 675 00	July 1, 1873		254
14 by 9, 10 by 7, 11 by 7, f. f., s. l.	6	70 00	100 00	1, 820 00	2, 600 00	July 1, 1873	Branch; main route $75, (233.)	255
17.3 by 9, f. f., s. l.	12	70 00	60 00	4, 121 25	3, 532 50	July 1, 1873		256
10.10 by 8, f. f., s. l.	15*	70 00	75 00	2, 184 00	2, 340 00	July 1, 1873		257
16.2 by 8.2, f. f., d. l.	13	70 00	60 00	1, 890 00	1, 620 00	July 1, 1873	Branch; main route $70, (223.)	258
16.2 by 8.2, f. f. d. l.	13	70 00	125 00	8, 330 00	14, 875 00	July 1, 1873	Main route; branches $80, (223,) $70, (258.)	259
14 by 7.6, f. f., s. l.	12	68 00	.....	.....	.....	Sept. 20, 1873	New; ordered April, 1874.	260
12.6 by 9, f. f., s. l.	11¼*	68 00	75 00	5, 304 00	5, 850 00	July 1, 1874		261

F.—*Table showing the re-adjustment, under the act of March 3, 1873*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	*Pounds.*	
262	Wis ..	13020	25018	Milwaukee, Two Rivers.	Milwaukee, Lake Shore and Western.	85	411	20
263	Pa	2425	.....	Irvine, Corry	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	95	407	20
264	Mass .	619	618	Salem, Gloucester....	Eastern	16	402	20
265	Va....	4413	.....	Petersburgh, Lynchburgh.	Atlantic, Mississippi and Ohio	123	433	22½
266	Del ...	3402	.....	Delmar, Crisfield.....	Eastern Shore	38	412	20
267	N. Y..	1042	1225	Oswego, Richland....	Rome, Watertown and Ogdensburgh.	28. 50	395	....
268	N. H..	278	257	Nashua, Wilton.....	Boston and Lowell and Nashua and Lowell.	16	393	25
269	W.Va.	4293	.....	Huntington, Hinton.	Chesapeake and Ohio.....	150. 42	383	22
270	Pa	2440	.....	Blairsville, Allegheny	Pennsylvania.....	63. 70	378	17
271	N. Y..	1010	1204	Newburgh, Chester ..	Erie	19. 75	377	20
272	Mich .	12517	24017	Detroit, Howard	Detroit, Lansing and Lake Michigan.	164. 67	375	20
273	N. Y..	1574	1203	Buffalo, Suspension Bridge.	Erie.....	25. 94	369	20
274	N. Y..	{1025} {1181}	1283	Utica, Watertown ...	Utica and Black River.....	92. 22	368	25
275	Pa	2436	.....	Tyrone, Clearfield ...	Pennsylvania	40. 60	366	15
276	Me ...	117	7	Portland, Rochester..	Portland and Rochester	52	361	20
277	Pa	2456	.....	Pittsburgh, Washington.	Pittsburgh, Cincinnati and Saint Louis.	22. 80	351	15
278	N.Y ..	1 566	1209	Ithaca, Cortland Village.	Utica, Ithaca and Elmira	23	266	20
279	Ill	11411	23027	State Line, Warsaw .	Toledo, Peoria and Warsaw ...	228. 75	369	20½
280	Iowa .	11010	27022	Waterloo, Mona	Illinois Central.....	80	362	15
281	Minn .	13838	26005	Du Luth, Moorhead..	Northern Pacific	229	361	20
282	Ohio ..	9035	.....	Valley Junction, Hagerstown.	Whitewater Valley	70. 45	372	19
283	N. Y..	1562	1263	Fort Henry, Ticonderoga.	New York and Canada, (late Vermont Central and Vermont and Canada.)	17	370	24
284	N. Y..	1024	1226	Watertown, Cape Vincent.	Rome, Watertown and Ogdensburgh.	26	364	20
285	N. Y..	1026	1227	De Kalb Junction, Pottsdam Junction.	.....do.....	25	363	20
286	Pa	2439	.....	Tyrone, Lock Haven.	Pennsylvania.....	55. 10	355	20
287	Mass .	637	628	Ayer, Mason Village.	Fitchburgh.....	23	350	25
288	Mass .	703	649	South Vernon Junction, Keene.	Cheshire and Ashuelot	24	349	24
289	Cal ...	14705	46005	Sacramento, Folsom City.	Sacramento Valley	23. 20	349	20
290	Pa	2444	.....	Meadville, Oil City ..	Atlantic and Great Western ..	36. 25	347	25
291	Ohio ..	9022	.....	Clayton, Keokuk.....	Toledo, Wabash and Western	44	346	22
292	Mass .	742	659	South Framingham, Lowell.	Boston, Clinton and Fitchburgh.	29	227	25
293	.....	.....	.....	.....	.....	.....	.....	.....
294	Iowa .	11016	27012	Clinton, La Crescent Junction.	Chicago, Dubuque and Minnesota.	178. 57	335	20
295	Va....	4412	.....	Petersburgh, Norfolk	Atlantic, Mississippi and Ohio.	81. 50	339	22½
296	Pa	2443	.....	Branch Junction, Indiana.	Pennsylvania.....	19	339	15
297	Ill	11409	23008	Elmwood, Buda.....	Chicago, Burlington and Quincy	45	336	14½
298	N. H .	309	260	Brock's Crossing, Conway.	Portsmouth, Great Falls and Conway.	64. 83	344	20
299	Ill	11901	23012	Streator, Aurora, Batavia.	Chicago, Burlington and Quincy	69. 79	344	24½
300	Pa	2409	.....	Honesdale, Lackawaxen.	Erie.....	25	343	20
301	N. Y..	1033	1206	Avon, Dansville	.....do.....	30. 73	340	20

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
12 by —, f. f., s. l..	12	67 00	.....	.....	.....	Oct. 20, 1873	New; ordered June, 1874. Main route; branch $40. (440.)	262
8 by 7, f. f., s. l...	12	67 00	85 00	6,365 00	6,569 00	July 1, 1873	50.2 miles formerly at $55.	263
No r. a.....	18	67 00	50 00	1,072 00	800 00	July 1, 1873	.....	264
21 by 9, f. f., s. l..	6	65 00	50 00	7,995 00	6,150 00	July 1, 1873	.....	265
28 by 9.4, f. f., s. l.	6	65 00	62 50	2,470 00	2,375 00	July 1, 1873	.....	266
No r. a.....	15*	65 00	50 00	1,852 50	1,645 00	July 1, 1873	.....	267
36 cubic feet; no r. a.	18	65 00	56 25	1,040 00	900 00	July 1, 1873	.....	268
20.7 by 6.10, f. f., s. l.	6	65 00	50 00	9,777 30	7,521 00	July 1, 1873	.....	269
10.9 by 8, f. f., s. l..	9¼*	65 00	60 00	4,140 50	3,822 00	July 1, 1873	.....	270
b. c., no r. a.....	12	65 00	50 00	1,283 75	987 50	July 1, 1873	Main route; branch $50.	271
10 by 9, f. f., s. l..	6	65 00	75 00	10,703 55	12,300 00	July 1, 1873	0.67 mile increase ...	272
b. c., no r. a.....	13	65 00	50 00	1,686 10	1,297 00	July 1, 1873	.....	273
13 by 9, f. f., s. l..	12	65 00	64 64	5,994 50	5,961 84	July 1, 1873	.....	274
10.9 by 8, f. f., s.l..	12	65 00	60 00	2,639 00	2,436 00	July 1, 1873	.....	275
13 by 6, 12 by 7, d. l.	12	65 00	55 55	3,380 00	2,888 60	July 1, 1873	.....	276
8.6 by 6.11, f. f., d. l.	12	65 00	60 00	1,482 00	1,368 00	July 1, 1873	.....	277
10.6 by 6.11, f. f., d. l.	12	65 00	50 00	1,495 00	1,150 00	July 1, 1873	1 mile increase.....	278
23 by 8.9, f. f. c., s. l.	6	64 00	60 00	15,240 00	14,880 00	July 1, 1873	111 miles formerly at $65; $600 ferriage; branch $50, (413.)	279
19.1½ by 9.2, f. f., s.l.	12	63 00	50 00	5,040 00	4,000 00	July 1, 1873	.....	280
13 by 7, f. f., s. l..	6	63 00	50 00	14,427 00	11,450 00	July 1, 1873	.....	281
12 by 7.4, f. f., s. l.	6	62 50	55 00	4,403 12	3,874 75	July 1, 1873	.....	282
14 by 6.8, f. f., s. l.	6	62 50	50 00	1,062 50	850 00	July 1, 1873	.....	283
No r. a.....	12	62 50	50 00	1,625 00	1,300 00	July 1, 1873	.....	284
No r. a.....	6	62 50	115 00	1,562 50	2,875 00	July 1, 1873	Branch; main route $138, (120.)	285
10.9 by 8, f. f., s. l..	12	62 50	60 00	3,443 75	3,306 00	July 1, 1873	.....	286
6 by 6, f. f., s. l...	12	62 50	50 00	1,437 50	1,150 00	July 1, 1873	.....	287
13.8 by 7.1, fixtures, s. l.	12	62 50	50 00	1,500 00	1,200 00	July 1, 1873	.....	288
6.6 by 5, no r. a ..	12	62 50	50 00	1,450 00	1,160 00	July 1, 1873	.....	289
12.6 by 8, f. f., s. l .	9*	62 50	75 00	2,265 62	2,718 75	July 1, 1873	.....	290
12 by —, f. f., s. l.	12	62 00	75 00	2,728 00	3,300 00	July 1, 1873	Branch; main route $273, (21,) and $255, (28.)	291
14 by 6.9, f. f., d. l.	12	62 00	50 00	1,798 00	1,450 00	July 1, 1873	.....	292
.....	.....	.....	.....	.....	.....	.....	Vacant	293
13.6 by 8.10, f.f.c., s. l.	6	60 00	55 00	10,714 20	9,821 35	Apr. 1, 1874	.....	294
21 by 9, f. f., s. l...	6	60 00	50 00	4,890 00	4,075 00	July 1, 1873	.....	295
b. c.; no r. a.....	12	60 00	55 00	1,140 00	1,045 00	July 1, 1873	.....	296
22 by 8.6, f. f., s. l .	6	60 00	50 00	2,700 00	2,225 00	July 1, 1873	Half mile increase. Branch; main route $60, (305.)	297
13 by 6, f. f., s. l ...	7*	60 00	50 00	3,899 80	3,241 50	July 1, 1873	.....	298
14 by 7, f. f., s. l ...	6	60 00	50 00	4,187 40	3,489 50	July 1, 1873	.....	299
b. c., no r. a.....	12	60 00	75 00	1,500 00	1,875 00	July 1, 1873	.....	300
b. c.; no r. a.....	12	60 00	59 37	1,843 80	1,824 00	July 1, 1873	.....	301

F.—*Table showing the re-adjustment, under the act of March 3, 1873,*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	*Pounds.*	
302	Kans.	14314	33012	Junction City, Clay Centre.	Junction and Fort Kearney	33.85	337	15
303	Wis.	13018	25017	Menasha, Neenah, Stevens Point.	Wisconsin Central, operated by Phillips & Colby Construction Company.	65.27	336	20
304	Pa.	2452	.....	Greenville, Parisville.	Chenango and Allegheny	33.50	331	15
305	Ill.	11409	23008	Rushville, Yates City.	Chicago, Burlington and Quincy	63.75	331	15
306	N. Y.	1509	1249	Buffalo, Emporium	Buffalo, New York and Philadelphia.	123.51	329	15
307	Ill.	11428	23040	Peoria, Rock Island	Peoria and Rock Island	92	329	20
308	N. J.	2105	.....	Philadelphia, New York.	Pennsylvania	93	327	20
309	Conn.	976	914	Hartford, New Saybrook.	Connecticut Valley	43.15	324	20
310	Mo.	10506	28006	Saint Joseph, Hopkins.	Kansas City, Saint Joseph and Council Bluffs.	61.50	322	24
311	Wash.	.....	43001	Kalama, Tacoma	Northern Pacific	106.60	322	15
312	N. Y.	1542	1276	Athens, Fairhaven	Southern Central	122	321	20
313	Pa.	2414	.....	Fort Clinton, Williamsport.	Philadelphia and Reading	121.53	321	15
314	Mass.	641	632	South Framingham, Milford.	Boston and Albany	12	315	24
315	N. H.	256	255	Concord, Portsmouth	Concord	60	315	15
316	Mass.	735	656	Mansfield, South Framingham.	Boston, Clinton and Fitchburgh.	22	314	24
317	Conn.	981	917	Litchfield, Hawleyville.	Shepaug, (late Shepaug Valley.)	32.25	314	20
318	R. I.	803	803	Providence, Bristol	Providence, Warren and Bristol	14.60	313	15
319	Kans.	14311	33011	Lawrence, Carbondale	Lawrence and Southwestern	32.90	310	15
320	N. Y.	1405	1228	Chenango Forks, Norwich.	Delaware, Lackawanna and Western.	30.69	310	15
321	Colo.	17038	38004	Denver, Black Hawk	Colorado Central	38.50	310	20
322	Mo.	10520a	28019	Quincy, Kirksville	Quincy, Missouri and Pacific	71.28	308	16
323	Iowa	11018	27007	Creston, Hopkins	Burlington and Missouri River	44.40	306	12
324	Ohio	9047	.....	Mansfield, Toledo	Pennsylvania Company	88.10	302	15
325	Iowa	11003	27005	Red Oak, Eastport	Burlington and Missouri River	50	276	24
326	R. I.	821	804	Warren, Fall River	Fall River, Warren and Providence.	7	230	20
327	Conn.	607	975	Putnam, Willimantic	Boston, Hartford and Erie	94.68	170	20
328	Ky.	9843	20016	Maysville, Paris	Maysville and Lexington	50	313	20
329	Mass.	656	636	Braintree Junction, Cohasset Junction.	South Shore	12	367	15
330	Ind.	12019	22019	Fort Wayne, Connersville,	Fort Wayne, Muncie and Cincinnati.	109	306	22
331	Kans.	14004	33004	Elwood, Hastings	Saint Joseph and Denver City	227.20	302	24
332	Kans.	14006	33006	Junction City, Parsons	Missouri, Kansas and Texas	156.50	299	24
333	Mich.	12509	24008	Jackson, Fort Wayne	Fort Wayne, Jackson and Saginaw.	96.30	293	20
334	Mich.	12516	24016	East Saginaw, Reed City.	Flint and Père Marquette	90.47	293	15
335	Mo.	10519a	28018	Quincy, Keokuk	Mississippi Valley and Western	41	290	20
336	Iowa	11016	27012	Clinton, La Crescent	Chicago, Dubuque and Minnesota.	178.57	280	20
337	Pa.	2413	.....	Pottsville, Herndon	Philadelphia and Reading	81.10	276	15
338	Ill.	11414	23038	Peoria, Jacksonville	Peoria, Pekin and Jacksonville	87.40	265	20
339	Me.	188	10	Old Town, Guilford	Consolidated European and North American, (late Bangor and Piscataquis.)	48.10	267	15
340	Conn.	977	915	New Haven, Ansonia	New Haven and Derby	13.50	264	22
341	Mich.	12955	24034	Walton Junction, Traverse City.	Continental Improvement Company.	26.26	259	5
342	Pa.	2405	.....	Philadelphia, Norristown.	Philadelphia and Reading	16.94	257	15

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of readjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
— by —, f. f., s. l.	6	60 00	.....	.....	.....	Apr. 15, 1873	New; ordered January, 1874.	302
14.2 by 7.10, f. f., s. l.	6	60 00	50 00	3,916 20	3,263 50	July 1, 1873	.....	303
12.6 by 8, f. f., s. l.	6	60 00	50 00	2,010 00	1,675 00	July 1, 1873	.....	304
22 by 8.6, f. f., s. l.	6	60 00	50 00	3,825 00	3,187 50	July 1, 1873	Main route; branch $60, (297.)	305
12 by 7.6, f. f., s. l.	6	60 00	50 00	7,410 60	6,175 50	July 1, 1873	.....	306
12 by 7, f. f., s. l.	6	60 00	50 00	5,520 00	4,600 00	July 1, 1873	.....	307
8 by 6.6, fixtures, s. l.	8½*	60 00	103 00	5,580 00	9,579 00	July 1, 1873	Main route; branch $50, (415.)	308
11 by 7, f. f., s. l.	12	60 00	50 00	2,589 60	2,158 00	July 1, 1873	.....	309
14.2 by 7, f. f., s. l.	6	60 00	50 00	3,690 00	3,075 00	July 1, 1873	Branch; main route $143, (115.)	310
12 by 5, f. f., s. l.	6	60 00	.....	.....	.....	Apr. 1, 1874	New; ordered July, 1874.	311
15 by 8, f. f., s. l.	6	60 00	50 00	7,820 00	6,600 00	July 1, 1873	$500 side-service	312
10.1 by 6.10, 7.8 by 6.8, f. f., s. l.	7*	60 00	65 00	7,291 80	7,899 45	July 1, 1873	.....	313
No apt	24*	60 00	50 00	1,020 00	900 00	July 1, 1873	$300 for mail messenger service.	314
12 by 6.8, f. f., s. l.	12	60 00	50 00	3,600 00	3,000 00	July 1, 1873	.....	315
No r. a	16½*	60 00	50 00	1,320 00	1,100 00	July 1, 1873	.....	316
9.6 by 6.6, f. f., s. l.	12	60 00	50 00	1,935 00	1,612 50	July 1, 1873	.....	317
No r. a	12	60 00	55 16	1,926 00	855 00	July 1, 1873	$1,050 side-service now 0.9 mile decrease.	318
8.4 by 6, f. f., s. l.	6	60 00	.....	.....	.....	Mar. 1, 1873	New; ordered October, 1873.	319
19.3 by 6.7, f. f., s. l	12	60 00	50 00	1,841 40	1,534 50	July 1, 1873	.....	320
Express car, s. l.	7	60 00	50 00	2,310 00	1,925 00	July 1, 1873	Main route; branch $50.	321
14 by 7, f. f. c., s. l.	6	60 00	50 00	4,276 80	3,564 00	July 1, 1873	.....	322
13 by 8.6, f. f., s. l.	6	60 00	50 00	2,664 00	2,220 00	July 1, 1873	.....	323
9.6 by 7.6, f. f., s. l.	12	60 00	.....	.....	.....	July 1, 1873	New; ordered July, 1874.	324
14 by 7, f. f., s. l.	10*	60 00	50 00	3,000 00	2,500 00	July 1, 1873	Branch; main route $200, (68.)	325
No r. a	6	60 00	50 00	420 00	350 00	July 1, 1873	.....	326
12.7 by 6.10, 12.10 by 6.10, f. f., d. l.	12	60 00	.....	.....	.....	Aug. 1, 1873	New; ordered April, 1874.	327
12 by 9, f. f., s. l.	12	59 00	50 00	2,950 00	2,500 00	July 1, 1873	.....	328
b. c.; no r. a	12	58 00	50 00	1,400 00	1,304 00	July 1, 1873	$704 for mail-messenger service.	329
12 by 7.8, f. f., s. l.	6	58 00	50 00	6,322 00	5,450 00	July 1, 1873	.....	330
17 by 7, f. f., s. l.	6	58 00	55 00	13,177 60	12,496 00	July 1, 1874	.....	331
18.8 by 6.8, f. f., s. l.	6	58 00	60 00	9,077 00	9,390 00	July 1, 1873	.....	332
10.6 by 7.6, f. f., s. l.	6	57 00	50 00	5,489 10	4,815 00	July 1, 1873	.....	333
21 by 8.10½, f. f., s. l.	7½*	57 00	50 00	5,156 79	4,523 50	July 1, 1873	.....	334
12 by 6.9, f. f., s. l., 13 by 9 additional for thro' mails.	6	57 00	50 00	2,337 00	2,050 00	July 1, 1873	.....	335
18 by 9, 12.2 by 7, f. f. c., s. l.	6	55 00	50 00	9,821 35	8,928 50	July 1, 1873	.....	336
10 by 7, 9 by 6, 6.6 by 4, f. f., s. l.	10½*	55 00	50 00	4,460 50	4,055 00	July 1, 1873	.....	337
13 by 8, f. f., s. l.	6½*	55 00	50 00	4,807 00	4,370 00	July 1, 1873	.....	338
18 by 7, f. f., s. l.	6	55 00	50 00	2,645 50	2,405 00	July 1, 1873	.....	339
No r. a	12	55 00	50 00	742 50	675 00	July 1, 1873	.....	340
14 by 7, s. l.	6	55 00	.....	.....	.....	Oct. 20, 1873	New; ordered January, 1874.	341
No r. a	12	55 00	50 00	891 55	812 00	July 1, 1873	.....	342

F.—*Table showing the re-adjustment, under the act of March 3, 1873*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	*Pounds.*	
343	Ind ...	12014	22014	Pern, La Porte.....	Chicago, Cincinnati and Louisville.	73	257	20
344	Ill	11920	23051	Streator, Pekin	Chicago, Pekin and Southwestern.	65.28	255	20
345	N. Y..	1545	1231	Cassfield Junction, Richfield Springs.	Delaware, Lackawanna and Western.	21	248	21
346	N. Y..	1577	1267	Syracuse, Lacona	Syracuse Northern	44.92	245	20
347	Pa	2464	.....	Connellsville, Uniontown.	Pittsburgh and Connellsville ..	12	256	15
348	Ky....	9610	20007	Lebanon Junction, Fish Point.	Louisville and Nashville.....	109.90	254	18
349	Mo....	10509	28009	Centralia, Columbia..	Saint Louis, Kansas City and Northern, (late North Missouri.)	22	249	15
350	Ill	11434	23042	Chicago, Danville....	Chicago, Danville and Vincennes.	108	248	19.2
351	Pa ...	2415	.....	Sunbury, Tomhicken.	Pennsylvania	44.10	247	20
352	Me....	201	11	Belfast, Burnham....	Maine Central, Belfast division.	34.19	244	20
353	Mass..	654	634	South Braintree Junction, Newport.	Old Colony and Newport	61.75	272	25
354	Mass..	.....	737	Cohasset Narrows, Wood's Hole.	Cape Cod, operated by Old Colony and Newport.	19	268	25
355	Ala ...	6615	.....	Chattanooga, Meridian.	Alabama and Chattanooga.....	290	265	12
356	N. C ..	5216	.....	Raleigh, Sandford....	Raleigh and Augusta Air-Line.	45.78	241	20
357	N. Y..	1043	1252	Brocton, Corry.....	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Buffalo, Corry and Pittsburgh.)	45.30	238	20
358	Del ...	3403	.....	Clayton, Easton.....	Maryland and Delaware.....	44	232	20
359	Iowa..	11019	27008	Viele, Unionville.....	Burlington and Southwestern..	104.75	234	20
360	Ind ...	12026	22026	Auburn, Logansport .	Detroit, Eel River and Illinois	32.80	227	20
361	Conn..	932	903	Middletown, Berlin Depot.	New York, New Haven and Hartford.	10	226	20
362	Ohio ..	9008	.....	Elyria, Millbury	Lake Shore and Michigan Southern.	74.98	39,087	25
363	Mo...	10523a	28022	Road House, Mexico .	Chicago and Alton	90	1,419	25
364	Iowa..	11005a	27015	Des Moines, Indianola	Chicago, Rock Island and Pacific.	21.40	243	17
365	Minn..	13840	26003	East St. Cloud Junction, Melrose.	Saint Paul and Pacific.....	35	223	14
366	Ind ...	12020	22020	Richmond, Ft. Wayne	Cincinnati, Richmond and Fort Wayne.	91.50	213	18
367	Kans..	14235	33010	Leavenworth, Holton.	Kansas Central.....	55.62	209	16
368	N. Y ..	1021	1243	Plattsburgh, Canada Line.	Montreal and Plattsburgh.....	23	208	12
369	N. Y ..	1045	1209	Goshen, Montgomery.	Erie.....	10.25	204	15
370	N. Y ..	1017	1259	Hoosac Junction, State Line.	Troy and Boston	5.50	199	15
371	Me....	9a	3	Newport, Dexter.....	Maine Central.....	14	196	20
372	Wis...	13009	25006	Horicon, Portage	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	45.25	194	20
373	Pa	2404	.....	Landsdale, Doylestown.	North Pennsylvania.....	9.80	193	20
374	Ohio ..	9006	.....	Leavittsburgh, Sharon	Atlantic and Great Western...	31.61	192	20
375	Ind ...	12027	22027	Rockville, Logansport	Logansport, Crawfordsville and Southwestern.	92.10	192	20
376	Mass .	672	639	New Bedford, West Wareham.	New Bedford, (late New Bedford and Taunton.)	16.25	190	20
377	Iowa .	11006	27020	Farley, Cedar Rapids	Dubuque and Southwestern...	55.37	190	15
378	N. H..	342	262	Hooksett, Pittsfield..	Suncook Valley.....	20	188	20
379	Fla ...	6402	.....	Lake City, Quincy ...	Jacksonville Pensacola and Mobile.	131.25	186	15

the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
12 by 8, f. f., s. l..	12	55 00	50 00	4,015 00	3,650 00	July 1, 1873	.....	343
18 by 9, f. f., s. l..	6	55 00	50 00	3,590 40	3,264 00	July 1, 1873	.....	344
19 by 6.7, f. f.; no r. a.	12	55 00	50 00	1,155 00	1,050 00	July 1, 1873	.....	345
9 by 7, f. f., s. l....	12	55 00	50 00	2,470 60	2,246 00	July 1, 1873	.....	346
b. c.; no r. a.....	12	54 00	50 00	648 00	600 00	July 1, 1873	Branch; main route $85, (204.)	347
14.10 by 7.6, f. f., s. l	6	54 00	50 00	5,934 60	5,495 00	July 1, 1873	Main route; branch $50.	348
No r. a.....	12	54 00	50 00	1,188 00	1,100 00	July 1, 1873	.....	349
12 by 7, f. f., s. l..	6	54 00	30 00	5,832 00	3,240 00	July 1, 1873	.....	350
8.10 by 5.7, f. f., s. l.	6	54 00	50 00	2,321 40	2,205 00	July 1, 1873	.....	351
12 by —, fixtures, s. l.	12	54 00	50 00	1,846 26	1,709 50	July 1, 1873	.....	352
b. c.; no r. a.....	12	53 00	100 00	4,202 75	7,105 00	July 1, 1873	$930 for mail-messenger service.	353
b. c.; no r. a.....	6	53 00	.....	.....	.....	July 1, 1873	New; ordered April, 1874.	354
10 by 8, f. f., s. l...	7	53 00	50 00	15,370 00	14,500 00	July 1, 1873	.....	355
11 by 6, f. f., s. l...	6	53 00	50 00	2,426 34	2,289 00	July 1, 1873	.....	356
8 by 7, f. f., s. l....	6	53 00	50 00	3,000 90	2,865 00	July 1, 1873	$600 for mail messenger service.	357
10 by 6, f. f., s. l...	6	52 50	50 00	2,310 00	2,200 00	July 1, 1873	.....	358
12 by 7, fixtures, s. l.	6	52 00	30 00	5,447 00	3,142 50	July 1, 1873	.....	359
15 by 10, f. f., s. l..	6	52 00	.....	.....	.....	Jan. 1, 1872	New; ordered April, 1874.	360
In b. c.; no r. a...	18	52 00	75 00	770 00	1,000 00	July 1, 1873	$250 for mail-messenger service.	361
r. p. o., 51.6 by 10.9, f. f. c., m. c., d. l.	26	50 00	.....	.....	.....	July 1, 1872	New; ordered June, 1874. Returns for March, 1874; no earlier returns.	362
r. p. o., 32 by 10, f. f. c., m. c., s. l.; r. a. apt., 24 by 10, f. f. c., s. l. 28.6 m.	14½	50 00	.....	.....	.....	Oct. 1, 1871	New; ordered July, 1874. Returns for May, 1874; no earlier returns.	363
10 by 6, f. f., s. l...	6	50 00	40 00	1,070 00	856 00	July 1, 1873	Main route; branch $50, (390.)	364
12.6 by 9, f. f., s. l.	6	50 00	.....	.....	.....	Dec. 20, 1872	New; ordered December, 1873.	365
14 by 7, s. l.....	6	50 00	40 00	4,575 00	3,660 00	July 1, 1873	.....	366
7 by 7, f. f., s. l....	6	50 00	.....	.....	.....	Aug. 1, 1872	New; ordered November, 1873.	367
No apt.; no r. a...	10	50 00	75 00	1,150 00	1,725 00	July 1, 1873	.....	368
7 by 6, f. f. c., s. l..	6	50 00	39 02	512 50	400 00	July 1, 1873	.....	369
No r. a	6	50 00	125 00	387 50	687 50	July 1, 1873	Branch; main route $121, (134:) $112.50 m. m. service now.	370
No r. a.....	12	50 00	60 00	840 00	840 00	July 1, 1873	$140 m. m. now.....	371
13 by 10, f. f., s. l..	6	50 00	75 00	2,262 50	3,393 75	July 1, 1873	.....	372
0.6 by 6.6, f. f., s. l.	18	50 00	75 00	490 00	735 00	July 1, 1873	Part; residue $110, (152.)	373
2.6 by 8, f. f., s. l	9½	50 00	60 00	1,580 50	1,896 60	July 1, 1873	Part; residue $100...	374
0 by 8, f. f., s. l...	6	50 00	40 00	4,605 00	3,684 00	July 1, 1873	.....	375
.7 by 1.11, locked; no r. a.	15*	50 00	55 00	1,093 75	1,093 75	July 1, 1873	$281.21 mail-messenger; formerly $200.	376
4 by 11, f. f., s. l ..	6	50 00	60 00	2,768 50	3,322 20	July 1, 1873	.....	377
10 by 2.10, f. f., d. l. 8 m., 1½ l. 4 m.	11*	50 00	30 00	1,000 00	600 00	July 1, 1873	.....	378
2.4 by 6.9, f. f., s. l.	7	50 00	75 00	6,562 50	9,843 75	Oct. 24, 1873	Part; residue $75....	379

F.—*Table showing the re-adjustment, under the act of March 3, 1873*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails which pass over the route per day.	Miles per hour.
						Miles.	*Pounds.*	
380	Ill....	11911	23047	Chester, Tamaroa....	Chester and Tamaroa Coal and Railroad Company.	42	185	15
381	Pa...	2428	.....	Harrisburgh, Auburn	Philadelphia and Reading.....	58.30	179	24
382	Wis..	13012	25019	Sheboygan, Princeton	Sheboygan and Fond du Lac ..	79.05	179	20
383	N. Y..	1005	1260	Stapleton, Tottenville	Staten Island.....	21	171	25
384	Iowa .	11012b	27002	Cedar Rapids, Postville.	Burlington, Cedar Rapids and Minnesota.	99.80	162	14
385	Ky ..	9842	20015	Owensborough, Owensborough Junction.	Evansville, Owensborough and Nashville, (late Owensborough and Russellville.)	36.13	158	15
386	N. Y..	.....	1290	Buffalo, Gowanda....	Buffalo and Jamestown.....	34.25	155	15
387	Me...	84	4	Calais, Princeton	Saint Croix and Penobscot.....	21	150	20
388	Pa....	2411	.....	Penn Haven Junction, Mount Carmel.	Lehigh Valley.....	50	142	20
389	Tenn .	10004	19004	Wartrace Depot, Shelbyville.	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga.)	8	142	15
390	Iowa .	11005a	27015	Summerset Junction, Winterset.	Chicago, Rock Island and Pacific.	27.10	142	17
391	Mass	732	654	East Salisbury, Amesbury.	Eastern	4	141	20
392	N. Y..	1518	1280	Plattsburgh, Au Sable Forks.	Whitehall and Plattsburgh....	23	140	22
393	Ill....	11903	23025	Maysville, Pittsfield .	Toledo, Wabash and Western.	6	135	15
394	Ill...	11900	23032	McLeansborough, Shawneetown.	Saint Louis and Southeastern, Consolidated, (late Saint Louis and Southeastern.)	41.25	135	12
395	Ill....	11427	23024	Pekin, Decatur	Toledo, Wabash and Western	68.46	134	22
396	Mich .	12527	24026	Grand Rapids, Newaygo.	Grand Rapids, Newaygo and Lake Shore.	36.40	132	1[illegible]
397	Conn .	938	906	Farmington, New Hartford.	New Haven and Northampton.	16	130	2[illegible]
398	Md ...	3515	.....	Bowie, Pope's Creek.	Baltimore and Potomac.....	48.68	12[illegible]	2[illegible]
399	N. C ..	5280	.....	Greensborough, Salem	Northwestern North Carolina .	29.31	119	17
400	S. C...	5610	.....	Alston, Spartanburgh C. H.	Spartanburgh and Union	68.75	119	17
401	Conn	943	909	Van Deusenville, State Line.	Housatonic.....	11	113	22
402	Pa....	2455	.....	Wilmington, Birdsborough.	Wilmington and Reading.....	63.60	112	1[illegible]
403	Va....	4408	.....	Richmond, West Point.	Richmond and York River	40	112	2[illegible]
404	Pa....	2474	.....	Marion Junction, Richmond Furnace.	Cumberland Valley	21.44	111	22
405	Iowa .	11020a	27023	Beulah, Elkader	Iowa Eastern.....	17.75	110	1[illegible]
406	Ohio ..	9045	.....	Black River, Ubricksville.	Lake Shore and Tuscarawas Valley.	102.45	108	2[illegible]
407	Pa....	2475	.....	Mount Dallas Station, Cumberland.	Pennsylvania	47.60	106	2[illegible]
408	Ohio ..	9031	.....	Xenia, Springfield ...	Little Miami	19	104	2[illegible]
409	Ill....	11902	23013	Mendota, Clinton....	Chicago, Burlington and Quincy	64.19	103	2[illegible]
410	Iowa .	11017b	27013	Stanwood, Tipton....	Chicago and Northwestern....	8.81	10[illegible]	2[illegible]
411	Ind ...	12015	22015	Fairland, Martinsville	Cincinnati and Martinsville...	38.50	100	1[illegible]
412	Conn .	942	908	Waterbury, Watertown.	Naugatuck.....	5.75	9[illegible]	1[illegible]
413	Ill ..	11411	23027	La Harpe, Burlington	Toledo, Peoria and Warsaw....	19.25	9[illegible]	2
414	Tenn .	10005	19005	Fayetteville, Decherd	Southern Railway Security Company.	40	98	1[illegible]
415	N. J ..	2105	.....	Bordentown, Trenton	Pennsylvania	6	96	1[illegible]
416	Cal ...	14707	46007	Davisville, Knight's Landing.	California Pacific.....	13.20	92	2

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
9.5 by 6.6, f. f., s. l.	6	50 00	40 00	2, 100 00	1, 680 00	July 1, 1873	0. 07 mile increase ..,	380
7.9 by 3.7, f. f., s. l.	7½*	50 00	40 00	2, 915 00	2, 332 00	July 1, 1873	.....	381
10 by 7.6, f. f., s. l.	6½*	50 00	60 00	4, 012 50	4, 803 00	July 1, 1874	$60 mail-messenger.	382
No apt.; no r. a ..	12	50 00	85 71	1, 800 00	1, 800 00	July 1, 1873	$750 side service now	383
9.11 by 7.7, f. f., s. l.	6	50 00	40 00	4, 990 00	3, 992 00	July 1, 1873	.....	384
9 by 6, f. f., s. l....	6	50 00	30 00	1, 806 50	1, 083 90	July 1, 1873	.....	385
r. a. in b. c.....	6	50 00	.....	.....	.....	Apr. 1, 1873	New; ordered April, 1874.	386
10 by 7, f. f.; no r.a.	6	50 00	100 00	2, 100 00	2, 100 00	July 1, 1873	$1,050 mail-messenger now.	387
10 by 7, f. f., s. l...	9½*	50 00	40 00	2, 500 00	2, 000 00	July 1, 1873	.....	388
No r. a.....	6	50 00	40 00	400 00	320 00	July 1, 1873	Branch; main route $205, $145, (63,114.)	389
10 by 6, f. f., s. l...	6	50 00	40 00	1, 355 00	1, 084 00	July 1, 1873	Branch; main route $50, (364.)	390
No r. a.....	15*	50 00	62 50	250 00	250 00	July 1, 1873	$50 mail-messenger now.	391
No apt.; no r. a..	6	50 00	43 47	1, 150 00	1, 000 00	July 1, 1873	.....	392
12 by —, f. f.....	6	50 00	.....	.....	.....	July 1, 1873	New; ordered April, 1874. Branch; main route $87.50, (195.)	393
12 by 6.6, f. f., s. l..	6	50 00	40 00	2, 062 50	1, 650 00	July 1, 1873	.....	394
12 by —, f. f., s. l..	6	50 00	40 00	3, 423 00	2, 738 40	July 1, 1873	.....	395
12 by 7, f. f., s. l...	6	50 00	30 00	1, 820 00	1, 092 00	July 1, 1873	.....	396
12 by 10, f. f., d. l..	12	50 00	75 00	800 00	1, 200 00	July 1, 1873	Branch; main route $160, (99)	397
9.3 by 8.6., f. f., s. l.	6	50 00	.....	.....	.....	Oct. 22, 1872	New; ordered April, 1874.	398
21 by 8, f. f., s.l ...	6	50 00	.....	.....	.....	Nov. 1, 1873	.....do	399
7.1 by 6.5, f. f., s. l.	6	50 00	40 00	3, 437 50	2, 800 00	July 1, 1873	.....	400
No apt.; no r. a..	6	50 00	80 00	550 00	880 00	July 1, 1873	Branch; main route $86, (196;) branch $30, (463.)	401
7.6 by 7, f. f., s.l...	6	50 00	40 00	3, 180 00	2, 544 00	July 1, 1873	.....	402
10.7 by 8.11, f. f., s.l	6¾*	50 00	25 00	2, 000 00	1, 000 00	July 1, 1873	....	403
10 by 5, fixtures, s. l.	6	50 00	.....	.....	.....	July 1, 1872	New; ordered July, 1874.	404
10 by 7, f. f., s. l...	6	50 00	.....	.....	.....	Dec. 1, 1872	New; ordered Aug., 1873.	405
14 by 7, fixtures, s. l.	7	50 00	.....	.....	.....	July 1, 1872	New; ordered Jan., 1874.	406
12 by 6.11, f. f., s. l.	7*	50 00	60 00	2, 380 00	2, 856 00	July 1, 1873	.....	407
5.6 by 8.6, f. f., s. l.	24	50 00	100 00	950 00	1, 900 00	July 1, 1873	Part; residue $210, (52.)	408
10 by 7, f. f., s. l....	6	50 00	40 00	3, 209 50	2, 567 60	July 1, 1873	.....	409
No r. a.....	6	50 00	.....	.....	.....	Jan. 16, 1874	New; ordered July, 1874.	410
11.3 by 6.10, f. f., s. l.	6	50 00	45 00	1, 925 00	1, 732 50	July 1, 1873	.....	411
No r. a	6	50 00	75 00	287 50	451 25	July 1, 1873	Branch	412
8.9 by 6.7½, f. f. c., s. l.	6	50 00	.....	.....	.....	Aug. 1, 1873	New; ordered June, 1874. Branch; main route $64, (279.)	413
8 by 8, f. f., s. l ..	6	50 00	40 00	2, 000 00	1, 600 00	July 1, 1873	.....	414
10 by 6.6, fixtures, s. l.	12	50 00	103 00	300 00	618 00	July 1, 1873	Branch; main route $60, (308.)	415
7.8 by 8.10, f. f.; no r. a.	7	50 00	75 00	910 00	1, 365 00	July 1, 1873	Branch, part; 23.8 miles disc'd. Main route $91, (177.)	416

F.—*Table showing the re-adjustment, under the act of March* 3, 1873,

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	*Pounds.*	
417	Ohio ..	9048	.....	Harbor, Youngstown	Pennsylvania.....	62. 10	90	20
418	Pa....	2484	.....	Lawrenceville, Elkland.	Fall Brook Coal Company	13. 80	89	12
419	Ind...	12030*a*	22031	Evansville, Boonville	Lake Erie, Evansville and Southeastern.	18	85	20
420	Mass .	690	646	Greenfield, Turner's Falls.	Vermont and Massachusetts...	5	81	21
421	Wis ..	13019	25022	Tomah, Grand Rapids	Wisconsin Valley	48	79	20
422	Cal ...	14702	46002	Gilroy, Hollister	Southern Pacific.....	14	71	30
423	Ill	11918	23050	Paris, Danville.....	Paris and Danville	36	67	18
424	Pa....	2470	.....	Union City, Titusville	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	14. 10	63	15
425	Conn .	945	910	Branchville, Ridgefield.	Danbury and Norwalk.....	4	53	20
426	N. Y..	.....	1292	Crawford Junction, Pine Bush.	New York and Oswego Midland	10. 18	53	13
427	Iowa .	11003 4th pt	27009	Vilisca, Clarinda	Burlington and Missouri River	16	50	14
428	Ark ..	7525*a*	.....	Chicot, Pine Bluff....	Texas, Mississippi River and Northwestern, (late Little Rock, Pine Bluff and New Orleans.)	72. 78	268	12
429	Mich .	12525	24024	Ypsilanti, Bankers...	Detroit, Hillsdale and Indiana.	65. 40	99	22
430	Pa....	2457	.....	Perkiomen Junction, Green Lane.	Philadelphia and Reading	17. 92	96	18
431	Ark ..	7502*a*	.....	Helena, Clarendon ...	Arkansas Central	48. 02	64	20
432	Ga....	6231	.....	Columbus, Hamilton.	North and South	23. 51	47	15
433	Ky ..	9824	20014	Grayson, Greenup Court-House.	Eastern Kentucky	23. 75	142	11½
434	Ky ...	9609	20006	Junction, Bardstown.	Louisville and Nashville	17. 30	127	12
435	Iowa .	11015	27024	Clinton, Anamosa....	Chicago and Northwestern	74. 10	109	24
436	Iowa .	11005*b*	27016	Washington, Sigourney.	Chicago, Rock Island and Pacific.	29	102	14
437	Ill	11408	23004	Elgin, Geneva.	Chicago and Northwestern	44	83	24
438	Mich .	12949	24030	East Saginaw, Saint Louis.	Saginaw Valley and St. Louis..	35. 98	81	25
439	Tenn .	10012	19012	Morristown, Riverside.	Cincinnati, Cumberland Gap and Charleston.	39. 80	80	11½
440	Wis ..	13020	25018	Manitowoc, Appleton	Milwaukee, Lake Shore and Western.	44. 50	78	15
441	Mass .	655	635	South Abington, Bridgewater.	Old Colony and Newport	7. 75	73	25
442	Mich .	12954	24033	Ionia, Stanton	Detroit, Lansing and Lake Michigan.	25. 30	70	30
443	Ala...	6616	.....	Opelika, Dadeville ...	Savannah and Memphis	30. 59	66	16
444	N. Y..	1567	1210	Goshen, Pine Island..	Erie, (late Goshen and Deckertown.)	11	65	30
445	Pa....	2460	.....	Lebanon, Tower City.	Philadelphia and Reading	43. 10	63	15½
446	Wis ..	13018	25017	Stevens Point, Colby	Wisconsin Central, operated by Phillips & Colby Construction Company.	48. 93	63	20
447	Tenn .	10015	19014	Memphis, Covington	Paducah and Memphis.....	38. 31	62	13
448	W.Va.	4189	.....	Laurel Junction, Volcano.	Laurel Fork and Sand Hill	8	60	10
449	Del ...	3405	.....	Wilmington, Landenburgh.	Wilmington and Western	19. 53	51	19
450	Mass .	621	620	Salem, Lawrence... .	Eastern	20	42	30
451	Ill	11909	23046	Jacksonville, Virden.	Jacksonville, Northwestern aad Southeastern.	31. 39	43	15
452	Iowa .	11012*a*	27004	Muscatine, Lone Tree	Burlington, Cedar Rapids, and Minnesota.	23. 23	41	11
453	Iowa .	11012*d*	27003	Vinton, Traer.....	.....do	24. 77	41	15½

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
9.4 by 6.6, f. f., a. l.	6	50 00	.....	.....	.....	July 1, 1873	New; ordered June, 1874.	417
11 by 7.6, f. f., a. l.	12	50 00	.....	.....	.....	Dec. 1, 1873	New; ordered July, 1874.	418
Locked-closet in b. c.	6	50 00	.....	.....	.....	Oct. 16, 1873	New; ordered October, 1873.	419
No r. a.....	12	50 00	100 00	250 00	500 00	July 1, 1873	Part; residue, $170, $160, (93, 98)	420
11 by 9, f. f., a. l...	6	50 00	.....	.....	.....	Sept. 1, 1873	New; ordered May, 1874.	421
No r. a.....	7	50 00	100 00	700 00	1,400 00	July 1, 1873	Branch; main route $80, (219.)	422
10 by 5, f. f., a. l...	6	50 00	30 00	1,800 00	1,080 00	July 1, 1873	.....	423
9 by 7, f. f., a. l....	6	50 00	40 00	705 00	564 00	July 1, 1873	.....	424
No r. a	12	50 00	30 00	200 00	120 00	July 1, 1873	Branch; main route $110, (155.)	425
No apt.....	6	50 00	.....	.....	.....	Oct. 1, 1873	New; ordered September, 1873.	426
No r. a.....	12	50 00	40 00	800 00	640 00	July 1, 1873	.....	427
5 by 4.6., ½ l. (See trips.)	3	45 00	.....	.....	.....	Oct. 1, 1873	New; ordered August, 1873.	428
7.6 by 5.6, f. f., a. l.	6	45 00	40 00	2,943 00	2,616 00	July 1, 1873	.....	429
b. c.; no r. a	6½*	45 00	40 00	806 40	716 80	July 1, 1873	.....	430
10 by 8, f. f., a. l...	6	45 00	.....	.....	.....	Feb. 1, 1873	New; ordered March, 1874.	431
3.6 by 2.6.; no r. a	6	45 00	30 00	1,057 95	705 30	July 1, 1873	.....	432
3 by 2.6., a. l.....	6	40 00	21 05	950 00	500 00	July 1, 1873	.....	433
No r. a.....	6	40 00	31 21	692 00	540 00	July 1, 1873	.....	434
9.6 by 9.6, f. f., a. l.	6	40 00	30 00	2,964 00	2,223 00	July 1, 1873	.....	435
9 by 6.4, f. f., a. l...	6	40 00	50 00	1,160 00	1,450 00	July 1, 1873	.....	436
11 6 by 9.6, f. f., a. l.	6	40 00	50 00	1,760 00	2,200 00	July 1, 1873	.....	437
No apt.; no r. a...	9	40 00	.....	.....	.....	Feb. 15, 1873	New; ordered January, 1874.	438
12 by 7, f. f., a. l ...	6	40 00	25 00	1,592 00	995 00	July 1, 1873	.....	439
No apt.	6	40 00	.....	.....	.....	Oct. 20, 1873	New; ordered June, 1874. Branch; main route $67, (262.)	440
b. c.; no r. a.	6	40 00	38 70	390 00	380 00	July 1, 1873	$80 mail-messenger..	441
No apt.; no r. a...	6	40 00	.....	.....	.....	Oct. 1, 1873	New; ordered January, 1874.	442
9 by 5, f. f., a. l	6	40 00	30 00	1,223 20	917 40	July 1, 1873	.....	443
9 by 6, f. f. c., a. l ..	6	40 00	22 73	440 00	250 00	July 1, 1873	.....	444
7 by 6.2, 6.10 by 6, f. f., a. l.	7½*	40 00	30 00	1,724 00	1,293 00	July 1, 1873	.....	445
11.2 by 7.10, f. f., a. l.	6	40 00	.....	.....	.....	Oct. 16, 1873	New; ordered August, 1874.	446
9 by 3.6, a. l.....	6	40 00	.....	.....	.....	Sept. 10, 1873	New; ordered May, 1874.	447
9 by 2.6.; no r. a	18	40 00	30 00	320 00	240 00	July 1, 1873	.....	448
5 by 6.10, f. f., a. l.	6	40 00	.....	.....	.....	Oct. 21, 1872	New; ordered April, 1874.	449
o. r. a	8½*	40 00	50 00	800 00	1,000 00	July 1, 1873	.....	450
5 by 3.3, f. f., a. l.	6	40 00	50 00	1,255 60	1,569 50	July 1, 1873	.....	451
14½ by 7.7, f. f., a. l.	6	40 00	30 00	929 20	696 90	July 1, 1873	.....	452
14½ by 7.7., f. f., a. l.	6	40 00	.....	.....	.....	Aug. 16, 1873	New; ordered April, 1874.	453

F.—*Table showing the re-adjustment, under the act of March 3, 1873,*

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day. Miles per hour.	
						Miles.	*Pounds.*	
454	Pa....	2488	.....	Pomeroy, Delaware ..	Pennsylvania, (late Pennsylvania and Delaware.)	38. 58	38	6
455	Ill....	11413	23022	Lake Station, Joliet..	Michigan Central.....	45	36	15
456	N. J ..	2109	.....	Pemberton Junction, Hightstown.	Pennsylvania.....	27. 50	35	30
457	Cal ...	14728	46013	Wilmington, Los Angeles.	Los Angeles and San Pedro....	22	35	20
458	N. J ..	2131	.....	Kinkora Junction, New Lisbon.	Pennsylvania.....	14. 41	31	25
459	Ind ...	12029	22029	Terre Haute, Martz..	Cincinnati and Terre Haute...	26. 15	52	10
460	Mich .	12948	24014	Flint, Otter Lake.....	Flint and Père Marquette.....	19½	43	11
461	Pa....	2407	.....	Bridgeport, Downingtown.	Philadelphia and Reading.....	21. 48	34	17
462	Mich .	12953	24032	Muskegon, Big Rapids	Chicago and Michigan Lake Shore.	56. 64	30	30
463	Conn .	943	909	Danbury, Brookfield .	Housatonic.....	5. 50	30	22
464	Wis ..	13014	25014	Stillwater Junction, Stillwater.	West Wisconsin.....	3. 25	27	23
465	Pa....	2477	.....	Conshohocken, Flourtown.	Philadelphia and Reading.....	7. 25	24	15½
466	N. H..	.....	351	Wolfborough Junction, Wolfborough.	Eastern	12. 11	11	30

Increase over former amount of annual pay by re-adjustment..... .....

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*			
No apt.	13	40 00				Apr. 1, 1874	New	454
r. a. in b. c	6	40 00	25 00	1,800 00	1,125 00	July 1, 1873		455
8 by 6.6, fixtures, a. l.	6	40 00	50 00	1,100 00	1,375 00	July 1, 1873	Part; residue $75	456
No apt	6	40 00	75 00	880 00	1,650 00	July 1, 1874		457
No apt	6	40 00	50 00	576 40	720 50	July 1, 1873		458
r. a. in b. c., a. l	6	35 00				Oct. 21, 1872	New; ordered January, 1874.	459
r. a., a. l. No distribution.	6	30 00				Feb. 1, 1873	New; ordered January, 1874.	460
No r. a.	6	30 00	25 00	644 40	537 00	July 1, 1873		461
12.8 by 7, fixtures; no r. a.	6	30 00				Sept 10, 1873	New; ordered January, 1874.	462
No apt; no r. a.	6	30 00	80 00	165 00	440 00	July 1, 1873	Branch; main route $86, (196.) Branch $50, (401.)	463
b. c; no r. a.	6	30 00				Oct. 16, 1873	New; ordered April, 1874. Branch; main route $100, (173.)	464
No r. a.	6	30 00				Mar. 17, 1873	New; ordered April, 1874.	465
No r. a.	12	30 00				July 1, 1873	New; ordered April, 1874.	466
				6,493,567 68	5,239,240 22			
				5,239,240 22				
				1,254,327 46				

JOHN L. ROUTT,
Second Assistant Postmaster-General.

G.—*Statement of the number, description, and cost of mail-bags and mail-catchers purchased by contract and put into service during the year ended June 30, 1874.*

Number.	Description.	Size.	Price.	Cost.	Aggregate.
1,250	Leather mail-pouches	No. 1	$8 20	$10,250 00	
2,850	....do	No. 2	6 45	18,382 50	
4,250	....do	No. 3	5 50	23,375 00	
3,600	....do	No. 4	4 35	15,660 00	
1,950	....do	No. 5	3 20	6,240 00	
13,900					$73,907 50
250	Leather horse mail-bags	No. 1	6 65	1,662 50	
100	....do	No. 2	5 65	565 00	
100	....do	No. 3	5 15	515 00	
450					2,742 50
6	Canvas mail-pouches	No. 1	4 85	29 10	
43	....do	No. 2	3 90	167 70	
8	....do	No. 3	3 45	27 60	
268	....do	No. 4	2 89	774 52	
240	....do	No. 5	2 65	636 00	
1,100	Catcher mail-pouches	.....	3 31	3,641 00	
1,665					5,275 92
1,033	Cotton canvas mail-sacks	No. 1	97	1,002 01	
973	....do	No. 2	74½	724 88	
7,550	....do	No. 3	21	1,585 50	
9,556					3,312 39
50,000	Jute canvas mail-sacks	No. 1	57	28,500 00	
1,000	....do	No. 3	15	150 00	
51,000					28,650 00
400	Mail-bag catchers	.....	15 00	6,000 00	
400	Sockets for same	.....	50	200 00	
30	....do	.....	70	21 00	
					6,221 00
13,987	Mail-bag-label cases	.....	25	3,496 75	
188,755	Printed wooden labels	.....	11-16	1,297 69	
					4,794 44
					124,903 75

Number and cost of mail locks and keys purchased and repaired during the year ended June 30, 1874.

Number.	Description.	Price.	Cost.
40,000	New iron mail-locks	$0 58	$23,200 00
10,000	New brass mail-locks	74	7,400 00
2,732	Old iron mail-locks repaired	10	273 20
6,013	Old brass mail-locks repaired	5	300 65
330	Old iron mail-keys repaired	2	6 60
			31,180 45

JOHN L. ROUTT.
Second Assistant Postmaster-General.

II.—*Railway post-office lines in the United States June 30, 1874, showing the increase in the service since June 30, 1873.*

Terminal points.	Miles of route.	Miles of service.	Service each way.	Number of clerks.			Increase of miles of route from June 30, 1873, to June 30, 1874.	Increase of miles of service from June 30, 1873, to June 30, 1874.	Increase in number of clerks from June 30, 1873, to June 30, 1874.			Increase in lines of railway post-offices from June 30, 1873, to June 30, 1874.
				$1,400.	$1,200.	$1,000.			$1,400.	$1,200.	$1,000.	
Albany, N. Y., to Buffalo, N. Y	298	1,192	Twice daily	11	8	8						
Atlanta, Ga., to Augusta, Ga	171	342	Daily		4							
Baltimore, Md., to Canandaigua, N. Y	325	650	....do	6	5							
Buffalo, N. Y., to Toledo, Ohio	295	1,180	Twice daily	10	15	17			1		3	
Boston, Mass., to Saint Albans, Vt	290	580	Daily	4	4							
Boston, Mass., to Fitchburgh, Mass	50	100	....do			1						
Boston, Mass., to Albany, N. Y	200	800	Twice daily	10	8	4			2			
Boston, Mass., to Wellfleet, Mass	122	244	Daily		6							
Boston, Mass., to Portland, Me (*a*)	116	232	....do	4	4	1	42	84	4	1	1	
Boston, Mass., to Bangor, Me	249	996	Twice daily	11	13					2		
Bristol, Tenn., to Chattanooga, Tenn	242	484	Daily	4	6							
Bangor, Me., to Vanceborough, Me	118	236	....do			4					2	
Burlington, Iowa, to Council Bluffs, Iowa	291	582	....do	4	4							
Bloomington, Ill., to Mexico, Mo (*b*)	200	400	....do	2	4		20	40	(*d*)	1		
Baltimore, Md., to Grafton, W. Va	280	1,120	Twice daily	6	10	1	280	1,120	6	10	1	1
Chattanooga, Tenn., to Atlanta, Ga	140	280	Daily	3	3							
Chicago, Ill., to Fort Howard, Wis (*c*)	242	484	....do	4	9				(*e*)	3		
Chicago, Ill., to Quincy, Ill	263	526	....do	5	11				(*d*)	1		
Chicago, Ill., to Dunleith, Ill	188	376	....do	5	4							
Chicago, Ill., to Iowa City, Iowa	237	474	....do	6	6							
Chicago, Ill., to Cedar Rapids, Iowa	219	438	....do	4	6				1			
Chicago, Ill., to Centralia, Ill	258	516	....do	5	8							
Chicago, Ill., to Cincinnati, Ohio	310	620	....do	1	8		310	620	1	8		1
Chicago, Ill., to Saint Louis, Mo	280	560	....do	5	8					1		
Chicago, Ill., to Toledo, Ohio	243	972	Twice daily	7	13	14				1	2	
Cleveland, Ohio, to Cincinnati, Ohio	244	488	Daily	5	7				1	1		
Cleveland, Ohio, to Indianapolis, Ind	282½	565	....do	4	4				(*d*)			
Cairo, Ill., to Centralia, Ill	112	224	....do	2	4				1	(*d*)		
Cairo, Ill., to Columbus, Ky., (by river)	21	168	Four times daily		2							
Clinton, Iowa, to Council Bluffs, Iowa	350	700	Daily	4	5							
Cincinnati, Ohio, to Saint Louis, Mo	340	680	....do	4	11				(*e*)	4		
Dubuque, Iowa, to Fort Dodge, Iowa	214	428	....do	4	2							
Detroit, Mich., to Chicago, Ill	284	568	....do	3	7				(*d*)	1		
Davenport, Iowa, to Council Bluffs, Iowa	307	614	....do	3	8				(*d*)	1		

a Formerly Boston, Mass., to South Berwick, Me.
b Formerly Bloomington, Ill., to Saint Louis, Mo.
c Termini of route changed from Green Bay to Fort Howard.
d Reduction of one.
e Reduction of two.

H.—*Railway post-office lines in the United States June* 30, 1874, *showing the increase in the service since June* 30, 1873—Continued.

Terminal points.	Miles of route.	Miles of service.	Service each way.	Number of clerks.			Increase of miles of route from June 30, 1873, to June 30, 1874.	Increase of miles of service from June 30, 1873, to June 30, 1874.	Increase in number of clerks from June 30, 1873, to June 30, 1874.			Increase in lines of railway post-offices from June 30, 1873, to June 30, 1874.
				$1,400.	$1,200.	$1,000.			$1,400.	$1,200.	$1,000.	
Freeport, Ill., to Centralia, Ill *	275	550	Daily	5	6	.....	.....	.....	(a)	.....	.....	.....
Grafton, W. Va., to Cincinnati, Ohio	309	1,236	Twice daily	1	16	.....	309	1,236	1	16	.....	1
Grafton, W. Va., to Columbus, Ohio	233	466	Daily	.....	8	.....	233	466	.....	8	.....	1
Humboldt, Tenn., to Jackson, Miss	276	552	....do	3	9	.....	.....	.....	(a)	3	.....	.....
Hannibal, Mo., to Denison, Texas (k)	575	1,150	....do	1	18	.....	143	286	1	4	.....	.....
Indianapolis, Ind., to Saint Louis, Mo	261	522	....do	5	4	.....	.....	.....	.....	1	.....	.....
Indianapolis, Ind., to Galesburgh, Ill	264	528	....do	1	7	.....	264	528	1	7	.....	1
Kansas City, Mo., to Council Bluffs, Iowa	200	400	....do	3	4	.....	.....	.....	.....	.....	.....	.....
Louisville, Ky., to Nashville, Tenn	185	370	....do	3	6	.....	.....	.....	.....	3	.....	.....
La Fayette, Ind., to Quincy, Ill	273	546	....do	6	13	.....	.....	.....	1	1	.....	.....
Lynchburgh, Va., to Bristol, Tenn	203	406	....do	4	6	.....	.....	.....	.....	2	.....	.....
Milwaukee, Wis., to Saint Paul, Minn	324	648	....do	7	11	.....	.....	.....	.....	1	.....	.....
Memphis, Tenn., to Chattanooga, Tenn	310	620	....do	7	6	.....	.....	.....	1	(a)	.....	.....
New Orleans, La., to Canton, Miss	206	412	....do	.....	4	.....	.....	.....	.....	.....	.....	.....
New York, N. Y., to Boston, Mass	234	936	Twice daily	11	19	9	.....	.....	.....	11	(e)	.....
New York, N. Y., to Washington, D. C	232	928	....do	11	10	10	.....	.....	.....	(d)	3	.....
New York, N. Y., to Buffalo, N. Y	422	1,688	....do	14	13	14	.....	.....	1	1	1	.....
New York, N. Y., to Albany, N. Y	144	576	....do	4	4	5	.....	.....	.....	.....	.....	.....
Omaha, Nebr., to Ogden, Utah	1,032	2,064	Daily	14	20	.....	.....	.....	(a)	.....	.....	.....
Philadelphia, Pa., to Pittsburgh, Pa	358	716	....do	6	5	6	.....	.....	(a)	(a)	1	.....
Peoria, Ill., to Burlington, Iowa †	43	86	....do	1	1	.....	.....	.....	(a)	(a)	.....	.....
Quincy, Ill., to Kansas City, Mo	261	522	....do	4	5	.....	.....	.....	.....	(a)	.....	.....
Rochester, N. Y., to Niagara Falls, N. Y	77	154	....do	.....	3	.....	.....	.....	.....	.....	.....	.....
Saint Louis, Mo., to Atchison, Kans	330	660	....do	5	8	.....	.....	.....	(a)	2	.....	.....
San Francisco, Cal., to Ogden, Utah	881	1,762	....do	11	15	.....	.....	.....	.....	1	.....	.....
Toledo, Ohio, to La Fayette, Ind	203	406	....do	3	10	.....	.....	.....	(a)	4	.....	.....
Washington, D. C., to Weldon, N. C	216	864	Twice daily	9	12	3	.....	.....	(a)	(c)	3	.....
Washington, D. C., to Lynchburgh, Va	178	356	Daily	3	5	.....	.....	.....	(a)	.....	.....	.....
Hornellsville, N. Y., to Dunkirk, N. Y ‡	128	256	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Consolidation of Freeport & Bloomington and Bloomington & Centralia lines, shown on last report.
k Formerly Sedalia, Mo., to Denison, Texas.
† Distance from Peoria to Galesburgh, Ill., included in Indianapolis, Ind., to Galesburgh, Ill.
‡ Number of clerks included in New York, N. Y., to Buffalo, N. Y.

a Reduction of one.
c Reduction of four.
d Reduction of five.
e Reduction of ten.

Recapitulation and comparative statement of the service of June 30, 1873, and June 30, 1874, showing the increase.

	June 30, 1873.		June 30, 1874.		Increase.	
Number of lines of railway post-offices		59		63		4
Aggregate number of miles of the above		14,866		16,414		1,548
Number of miles of actual service performed daily		34,925		39,199		4,274
Number of miles of actual service performed annually		12,747,625		14,307,635		1,560,010
Number of head clerks, at $1,400 per annum	283		288		5	
Number of clerks, at $1,200 per annum	379		465		86	
Number of assistant clerks, at $1,000	90		97		7	
Making total number of clerks	752		850		98	
With annual compensation amounting to		$941,000.00		$1,058,200.00		$117,200.00

H.—*Railway post-office lines in the United States June* 30, 1874, *showing the increase in the service since June* 30, 1873—Continued.

Terminal points.	Miles of route.	Miles of service.	Service each way.	Number of clerks.			Increase of miles of route from June 30, 1873, to June 30, 1874.	Increase of miles of service from June 30, 1873, to June 30, 1874.	Increase in number of clerks from June 30, 1873, to June 30, 1874.			Increase in lines of railway post-offices from June 30, 1873, to June 30, 1874.
				$1,400.	$1,200.	$1,000.			$1,400.	$1,200.	$1,000.	
Freeport, Ill., to Centralia, Ill *	275	550	Daily	5	6	.....	.....	.....	(a)	.....	.....	.....
Grafton, W. Va., to Cincinnati, Ohio	309	1,236	Twice daily	1	16	.....	309	1,236	1	16	.....	1
Grafton, W. Va., to Columbus, Ohio	233	466	Daily	.....	8	.....	233	466	.....	8	.....	1
Humboldt, Tenn., to Jackson, Miss	276	552	....do	3	9	.....	.....	.....	(a)	3	.....	.....
Hannibal, Mo., to Denison, Texas (b)	575	1,150	....do	1	18	.....	143	286	1	4	.....	.....
Indianapolis, Ind., to Saint Louis, Mo	261	522	....do	5	4	.....	.....	.....	.....	1	.....	.....
Indianapolis, Ind., to Galesburgh, Ill	264	528	....do	1	7	.....	264	528	1	7	.....	1
Kansas City, Mo., to Council Bluffs, Iowa	200	400	....do	3	4	.....	.....	.....	.....	.....	.....	.....
Louisville, Ky., to Nashville, Tenn	185	370	....do	3	6	.....	.....	.....	.....	3	.....	.....
La Fayette, Ind., to Quincy, Ill	273	546	....do	6	13	.....	.....	.....	1	1	.....	.....
Lynchburgh, Va., to Bristol, Tenn	203	406	....do	4	6	.....	.....	.....	.....	2	.....	.....
Milwaukee, Wis., to Saint Paul, Minn	324	648	....do	7	11	.....	.....	.....	.....	1	.....	.....
Memphis, Tenn., to Chattanooga, Tenn	310	620	....do	7	6	.....	.....	.....	1	(a)	.....	.....
New Orleans, La., to Canton, Miss	206	412	....do	.....	4	.....	.....	.....	.....	.....	.....	.....
New York, N. Y., to Boston, Mass	234	936	Twice daily	11	19	9	.....	.....	.....	11	(c)	.....
New York, N. Y., to Washington, D. C	232	928	....do	11	10	10	.....	.....	.....	(d)	3	.....
New York, N. Y., to Buffalo, N. Y	422	1,688	....do	14	13	14	.....	.....	1	1	1	.....
New York, N. Y., to Albany, N. Y	144	576	....do	4	4	5	.....	.....	.....	.....	.....	.....
Omaha, Nebr., to Ogden, Utah	1,032	2,064	Daily	14	20	.....	.....	.....	(a)	.....	.....	.....
Philadelphia, Pa., to Pittsburgh, Pa	358	716	....do	6	5	6	.....	.....	(a)	(a)	1	.....
Peoria, Ill., to Burlington, Iowa †	43	86	....do	1	1	.....	.....	.....	(a)	(a)	.....	.....
Quincy, Ill., to Kansas City, Mo	261	522	....do	4	5	.....	.....	.....	.....	(a)	.....	.....
Rochester, N. Y., to Niagara Falls, N. Y	77	154	....do	.....	3	.....	.....	.....	.....	.....	.....	.....
Saint Louis, Mo., to Atchison, Kans	330	660	....do	5	8	.....	.....	.....	(a)	2	.....	.....
San Francisco, Cal., to Ogden, Utah	881	1,762	....do	11	15	.....	.....	.....	.....	1	.....	.....
Toledo, Ohio, to La Fayette, Ind	203	406	....do	3	10	.....	.....	.....	(a)	4	.....	.....
Washington, D. C., to Weldon, N. C	216	864	Twice daily	9	12	3	.....	.....	(a)	(c)	3	.....
Washington, D. C., to Lynchburgh, Va	178	356	Daily	3	5	.....	.....	.....	(a)	.....	.....	.....
Hornellsville, N. Y., to Dunkirk, N. Y ‡	128	256	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Consolidation of Freeport & Bloomington and Bloomington & Centralia lines, shown on last report.
b Formerly Sedalia, Mo., to Denison, Texas.
† Distance from Peoria to Galesburgh, Ill., included in Indianapolis, Ind., to Galesburgh, Ill.
‡ Number of clerks included in New York, N. Y., to Buffalo, N. Y.

a Reduction of one.
c Reduction of four.
d Reduction of five.
e Reduction of ten.

Recapitulation and comparative statement of the service of June 30, 1873, and June 30, 1874, showing the increase.

	June 30, 1873.		June 30, 1874.		Increase.	
Number of lines of railway post-offices		59		63		4
Aggregate number of miles of the above		14,866		16,414		1,548
Number of miles of actual service performed daily		34,925		39,199		4,274
Number of miles of actual service performed annually		12,747,625		14,307,635		1,560,010
Number of head clerks, at $1,400 per annum	283		288		5	
Number of clerks, at $1,200 per annum	379		465		86	
Number of assistant clerks, at $1,000	90		97		7	
Making total number of clerks	752		850		98	
With annual compensation amounting to		$841,000.00		$1,058,200.00		$117,200.00

THROUGH-MAIL TABLES.

1.—*Through mails to San Francisco from Washington.*

ROUTE.—From Washington, D. C., via Parkersburgh, W. Va., Cincinnati, Ohio, Peoria, Ill., Galesburg, Ill., Burlington, Iowa, Omaha City, Nebr., Ogden, Utah, Sacramento City, Cal., Stockton, Cal. and Oakland, Cal., to San Francisco, Cal.—3,151 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	30	5,725 05	190 50	166 30	214 50	2	28	28	.....	
November, 1873	31	5,772 20	186 12	166 25	214 30	9	22	22	.....	
December, 1873	31	5,683 20	183 20	168 40	211 30	14	17	17	.....	
January, 1874	31	5,739 05	185 08	168 40	219 00	11	20	20	.....	
February, 1874	27	4,951 40	183 23	168 40	229 50	11	16	14	.....	
March, 1874	32	5,891 35	184 06	168 40	229 50	14	18	14	.....	
April, 1874	30	5,189 45	172 59	168 40	193 00	25	5	5	.....	
May, 1874	31	5,314 10	171 25	168 40	193 00	28	3	3	.....	
June, 1874	30	5,167 05	172 14	169 30	193 30	27	3	2	.....	
July, 1874	31	5,311 20	171 20	169 25	195 45	29	2	2	.....	
August, 1874	31	5,372 25	173 18	169 10	193 30	26	5	5	.....	
September, 1874	30	5,130 30	171 01	167 25	193 20	27	3	2	.....	
Whole period	365	65,248 20	178 45	166 25	229 50	223	142	134	.....	

2.—*Through mails to Washington from San Francisco.*

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Omaha City, Nebr., Burlington, Iowa, Galesburgh, Ill., Peoria, Ill., Cincinnati, Ohio, and Parkersburgh, W. Va., to Washington, D. C.—3,151 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	5,319 20	171 35	169 45	179 00	28	3	.....	.....	.....
November, 1873	30	5,054 35	168 29	167 05	172 30	27	3	.....	.....	.....
December, 1873	31	5,256 00	169 32	167 30	191 30	29	2	1	.....	
January, 1874	31	5,262 00	169 44	167 30	194 15	29	2	2	.....	
February, 1874	28	4,734 10	169 04	167 30	191 30	27	1	1	.....	
March, 1874	31	5,691 25	183 35	167 30	239 30	16	15	14	.....	
April, 1874	30	5,043 40	168 07	167 30	178 50	29	1	.....	.....	.....
May, 1874	31	5,235 25	168 53	167 30	191 30	29	2	1	.....	
June, 1874	30	5,146 05	171 32	168 15	172 45	30	.....	.....	.....	
July, 1874	31	5,264 15	169 48	166 30	191 40	28	3	1	.....	
August, 1874	31	5,237 45	168 57	167 30	191 30	30	1	1	.....	
September, 1874	30	5,079 20	169 18	167 30	191 30	29	1	1	.....	
Whole period	365	62,324 00	170 45	166 30	239 30	331	34	22	.....	

3.—*Through mails to San Francisco from New York.*

ROUTE.—From New York, N. Y., via Harrisburgh, Pa., Pittsburgh, Pa., (also from New York, via Erie, Pa.,) Chicago, Ill., Clinton, Iowa, Omaha City, Nebr., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland, Cal., to San Francisco, Cal.—3,307 miles, (3,370 miles via Erie, Pa.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	56	9,742 10	173 58	168 15	183 30	56	.....	.....	.....	.....
November, 1873	51	8,867 45	173 52	168 10	183 05	51	.....	.....	.....	.....
December, 1873	50	8,816 30	176 18	168 10	199 00	45	5	4	.....	3
January, 1874	52	9,078 15	174 34	168 10	184 45	46	6	.....	.....	2
February, 1874	49	8,672 15	176 59	168 10	217 20	41	8	5	.....	4
March, 1874	54	9,740 00	180 22	168 10	229 20	34	20	9	.....	6
April, 1874	55	9,564 10	173 53	168 10	182 30	55	.....	.....	.....	.....
May, 1874	57	9,923 35	174 05	168 10	183 55	57	.....	.....	.....	.....
June, 1874	54	9,437 30	174 46	168 15	192 30	52	2	1	.....	1
July, 1874	56	9,750 15	174 06	168 15	182 30	55	1	.....	.....	1
August, 1874	53	9,234 25	174 14	168 10	183 40	53	.....	.....	.....	.....
September, 1874	54	9,412 50	174 18	166 25	185 00	52	2	.....	.....	1
Whole period	641	111,239 40	173 32	166 25	229 20	597	44	19	.....	18

4.—*Through mails to New York from San Francisco.*

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Omaha City, Nebr., Clinton, Iowa, Chicago, Ill., Pittsburgh, Pa., and Harrisburgh, Pa., (also, after passing Chicago, via Erie, Pa.,) to New York, N. Y.—3,307 miles, (3,370 miles via Erie, Pa.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	5,288 55	170 36	168 35	192 45	28	3	1	.....	1
November, 1873	30	5,112 20	170 24	168 40	193 00	27	3	1	.....	1
December, 1873	31	5,261 15	169 43	168 30	175 00	27	4	.....	.....	.....
January, 1874	31	5,291 25	170 41	168 30	195 15	27	4	1	.....	1
February, 1874	28	4,765 25	170 11	168 35	192 45	25	3	1	.....	1
March, 1874	31	5,683 35	183 20	168 30	240 50	17	14	14	.....	7
April, 1874	30	5,076 40	169 13	168 35	175 50	29	1	.....	.....	.....
May, 1874	31	5,283 45	170 26	168 30	193 00	28	3	1	.....	1
June, 1874	30	5,070 50	169 10	168 20	174 45	29	1	.....	.....	.....
July, 1874	31	5,252 25	169 25	168 30	192 35	30	1	1	.....	1
August, 1874	31	5,234 25	168 51	167 30	171 40	31	.....	.....	.....	.....
September, 1874	30	5,101 45	170 03	168 30	193 00	29	1	1	.....	1
Whole period	365	62,422 45	171 01	167 30	240 50	327	38	21	.....	14

5.—*Through mails to San Francisco from Boston.*

ROUTE.—From Boston, Mass., via Albany, N. Y., Buffalo, N. Y., Erie, Pa., Toledo, Ohio, Chicago, Ill., Clinton, Iowa, Omaha City, Nebr., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland, Cal., to San Francisco, Cal.—3,449 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	5,689 25	183 31	183 15	186 30	31	.....	.....	.....	.....
November, 1873	30	5,507 05	183 34	183 10	186 05	30	.....	.....	.....	.....
December, 1873	31	5,820 05	187 44	183 10	208 15	24	7	4	.....	1
January, 1874	31	5,456 30	176 00	173 10	201 45	26	5	3	.....	1
February, 1874	27	4,858 55	179 57	173 10	221 15	19	8	5	.....	1
March, 1874	32	5,921 35	185 02	173 10	234 20	17	15	11	.....	1
April, 1874	30	5,252 05	175 04	173 10	197 15	28	2	2	.....	1
May, 1874	31	5,409 20	174 29	173 10	200 55	30	1	1	.....	1
June, 1874	30	5,235 40	174 31	173 15	197 15	28	2	1	.....	1
July, 1874	31	5,487 15	177 00	173 10	199 15	26	5	5	.....	1
August, 1874	31	5,421 40	174 53	173 10	198 20	29	2	2	.....	1
September, 1874	30	5,205 05	173 30	171 25	178 00	29	1	.....	.....	1
Whole period	365	65,264 40	178 48	171 25	234 20	317	48	34	.....	12

6.—*Through mails to Boston from San Francisco.*

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Omaha City, Nebr., Clinton, Iowa, Chicago, Ill., Toledo, Ohio, Erie, Pa., Buffalo, N. Y., and Albany, N. Y., to Boston, Mass.—3,449 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	5,414 45	174 14	170 00	196 00	23	8	3	.....	4
November, 1873	30	5,158 30	171 57	169 45	179 00	27	3	.....	.....	.....
December, 1873	31	5,341 45	172 18	171 30	178 00	29	2	.....	.....	.....
January, 1874	31	5,369 00	173 11	171 30	196 00	28	3	1	.....	.....
February, 1874	28	4,856 30	173 26	171 30	195 30	25	3	1	.....	.....
March, 1874	31	5,775 15	186 17	171 00	244 00	17	14	14	.....	.....
April, 1874	30	5,160 30	172 01	171 00	190 00	29	1	.....	.....	.....
May, 1874	31	5,383 30	173 39	171 00	195 30	28	3	3	.....	.....
June, 1874	30	5,150 45	171 41	171 15	177 00	28	2	.....	.....	.....
July, 1874	31	5,380 45	173 34	171 00	195 30	25	6	1	.....	.....
August, 1874	31	5,318 30	171 33	171 00	179 00	30	1	.....	.....	.....
September, 1874	30	5,201 00	173 22	171 00	190 00	26	4	.....	.....	.....
Whole period	365	63,501 45	174 00	169 45	244 00	315	50	23	.....	4

7.—*Through mails to San Francisco from Cincinnati.*

ROUTE.—From Cincinnati, Ohio, via Peoria, Ill., Galesburgh, Ill., Burlington, Iowa, Omaha City, Nebr., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland, Cal., to San Francisco, Cal.—2,539 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	4,697 00	151 30	144 15	168 35	22	9	9	.....	6
November, 1873	29	4,350 10	156 54	144 10	168 30	20	9	9	.....	5
December, 1873	32	4,946 45	154 33	144 10	192 30	20	12	8	.....	5
January, 1874	31	4,835 45	155 59	144 10	193 30	18	13	13	.....	8
February, 1874	28	4,227 25	150 58	144 40	181 50	20	8	6	.....	6
March, 1874	31	4,949 10	159 39	144 10	205 50	15	16	12	.....	12
April, 1874	30	4,397 10	146 34	144 40	168 45	28	2	2	.....	2
May, 1874	31	4,549 30	146 45	144 40	172 25	29	2	2	.....	2
June, 1874	30	4,475 05	149 10	145 30	169 30	25	5	4	.....	5
July, 1874	30	4,424 40	147 29	143 25	169 35	27	3	2	.....	4
August, 1874	32	4,704 15	147 00	145 25	169 30	30	2	2	.....	1
September, 1874	30	4,498 10	149 56	143 40	174 15	24	6	5	.....	5
Whole period ..	365	55,245 05	151 21	143 25	205 50	278	87	74	.....	61

8.—*Through mails to Cincinnati from San Francisco.*

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Omaha City, Nebr., Burlington, Iowa, Galesburgh, Ill., and Peoria, Ill., to Cincinnati, Ohio—2,539 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
ctober, 1873	31	4,569 35	147 24	135 35	161 45	11	20	2	.....	2
lovember, 1873	30	4,252 55	141 45	137 45	147 30	18	12	.....	.....	.....
ecember, 1873	31	4,368 40	140 55	137 35	147 30	20	11	.....	.....	.....
anuary, 1874	31	4,487 00	144 44	137 35	171 15	11	20	1	.....	1
ebruary, 1874	28	3,966 50	142 23	137 00	161 35	16	12	1	.....	1
larch, 1874	31	4,848 30	156 24	137 10	218 30	8	23	13	.....	7
pril, 1874	30	4,256 00	141 52	137 10	147 15	15	15	.....	.....	.....
ay, 1874	31	4,379 15	141 15	137 10	146 25	17	14	.....	.....	.....
une, 1874	30	4,218 15	140 36	137 10	161 10	20	10	1	.....	1
ily, 1874	31	4,329 35	139 39	137 10	161 30	24	7	1	.....	1
ugust, 1874	31	4,343 50	140 07	137 10	145 45	21	10	.....	.....	.....
eptember, 1874	30	4,327 40	144 15	137 10	169 45	11	19	2	.....	2
Whole period ...	365	52,368 05	143 28	135 35	218 30	192	173	21	.....	15

9.—*Through mails to San Francisco from Chicago.*

ROUTE.—From Chicago, Ill., via Clinton, Iowa, Omaha City, Nebr., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland, Cal., to San Francisco, Cal.—2,406 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later dates.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	4,039 40	130 18	130 00	133 15	31	.....	.....	.....	.....
November, 1873	30	3,917 00	130 34	130 10	133 05	30	.....	.....	.....	.....
December, 1873	31	4,129 50	133 13	130 10	156 20	26	5	1	.....	.....
January, 1874	31	4,052 25	130 43	130 10	134 45	29	2	.....	.....	.....
February, 1874	28	3,756 05	134 09	130 10	167 20	22	6	3	.....	.....
March, 1874	31	4,303 45	138 49	130 10	191 20	20	11	4	.....	.....
April, 1874	30	3,913 35	130 27	130 10	132 25	30	.....	.....	.....	.....
May, 1874	31	4,047 50	130 34	130 10	133 55	31	.....	.....	.....	.....
June, 1874	30	3,914 10	130 28	130 06	142 15	29	1	.....	.....	.....
July, 1874*	19	2,470 05	130 00	129 55	130 05	19	.....	.....	.....	.....
August, 1874	30	3,949 35	131 39	129 25	154 00	28	2	2	.....	.....
September, 1874	30	3,907 35	130 15	128 10	134 45	29	1	.....	.....	.....
Whole period...	352	46,401 35	131 47	128 10	191 20	324	28	10	.....	.....

* Transmission of post-bill cards interrupted by fire at Chicago.

10.—*Through mails to Chicago from San Francisco.*

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Omaha City, Nebr., and Clinton, Iowa, to Chicago, Ill.—2,406 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	4,009 20	129 20	128 00	134 35	29	2	.....	.....	.....
November, 1873	30	3,881 05	129 22	129 00	131 25	30	.....	.....	.....	.....
December, 1873	31	4,009 55	129 21	128 45	129 40	31	.....	.....	.....	.....
January, 1874	31	4,010 50	129 22	128 50	130 10	31	.....	.....	.....	.....
February, 1874	28	3,625 30	129 28	129 10	130 45	28	.....	.....	.....	.....
March, 1874	31	4,225 25	136 18	129 00	177 35	25	6	6	.....	.....
April, 1874	30	3,882 00	129 24	129 00	133 50	29	1	.....	.....	.....
May, 1874	31	4,004 10	129 10	128 45	130 00	31	.....	.....	.....	.....
June, 1874	30	3,870 40	129 10	128 45	130 55	30	.....	.....	.....	.....
July, 1874	31	3,998 40	128 59	128 40	130 00	31	.....	.....	.....	.....
August, 1874	31	4,000 25	129 02	128 35	129 25	31	.....	.....	.....	.....
September, 1874	30	3,875 55	129 11	128 40	132 10	30	.....	.....	.....	.....
Whole period...	365	47,393 55	129 50	128 00	177 35	356	9	6	.....	.....

11.—*Through mails to San Francisco from Saint Louis.*

ROUTE.—From Saint Louis, Mo., via Kansas City, Mo., Denver City, Colo., Cheyenne, Wyo., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland, Cal., to San Francisco, Cal.—2,400 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	4,096 30	132 08	131 50	135 05	31	.....	.....	.....	.....
November, 1873	30	3,964 35	132 09	131 45	134 40	30	.....	.....	.....	.....
December, 1873	31	4,360 05	140 38	132 40	175 30	22	9	7	.....	6
January, 1874	39	5,648 15	144 49	133 10	169 10	28	11	8	.....	6
February, 1874	28	4,082 45	145 49	143 10	167 15	23	5	2	.....	4
March, 1874	31	4,802 15	154 54	143 10	204 20	14	17	8	.....	9
April, 1874	30	4,446 25	148 12	143 10	167 30	24	6	6	.....	4
May, 1874	31	4,623 10	149 08	143 10	170 55	24	7	7	.....	5
June, 1874	30	4,484 15	149 28	143 15	167 20	22	8	7	.....	6
July, 1874	30	4,501 05	150 02	143 10	191 15	22	8	7	.....	8
August, 1874	32	4,758 15	148 41	143 10	191 40	26	6	6	.....	5
September, 1874	29	4,382 35	151 07	143 10	171 00	19	10	9	.....	8
Whole period ...	372	54,150 10	145 33	131 45	204 20	285	87	67	.....	61

12.—*Through mails to Saint Louis from San Francisco.*

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Cheyenne, Wyo., Denver City, Colo., and Kansas City, Mo., to Saint Louis, Mo.—2,400 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of a later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	4,058 30	130 55	125 15	149 45	23	8	5	.....	5
November, 1873	29	3,786 35	130 34	125 30	152 15	22	7	4	.....	7
December, 1873	32	4,285 50	133 55	125 30	156 00	22	10	8	.....	6
January, 1874	31	4,076 25	131 29	125 15	150 30	24	7	5	.....	7
February, 1874	28	3,713 05	132 37	126 15	150 40	19	9	6	.....	6
March, 1874	31	4,575 15	147 35	126 00	219 15	12	19	16	1	10
April, 1874	30	3,983 35	132 47	126 20	160 45	23	7	2	.....	6
May, 1874	30	4,034 30	134 29	131 05	155 25	24	6	1	.....	7
June, 1874	31	4,125 30	133 04	131 00	146 50	27	4	.....	.....	3
July, 1874	31	4,159 00	134 09	131 05	155 05	26	5	2	.....	5
August, 1874	31	4,200 55	135 11	130 00	157 10	24	7	2	1	6
September, 1874	30	4,040 25	134 40	130 00	156 00	24	6	1	.....	5
Whole period ...	365	49,039 35	134 21	125 15	219 15	270	95	52	2	73

13.—*Through mails to New Orleans from Washington.*

ROUTE.—From Washington, D. C., via Lynchburgh, Va., Bristol, Tenn., Knoxville, Tenn., Cleveland, Tenn., Dalton, Ga., Calera, Ala., (till May 11, 1874, and thence, after passing Dalton, via Atlanta, Ga.,) Montgomery, Ala., and Mobile, Ala., to New Orleans, La.—1,188 miles, (1,216 miles via Atlanta, Ga.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	2,304 00	71 05	70 00	94 15	30	1	1	.....	
November, 1873*	30	2,246 05	74 52	69 15	106 15	25	5	4	.....	
December, 1873	31	2,451 00	79 03	77 15	101 30	28	3	2	.....	
January, 1874	31	2,546 30	82 08	77 15	125 30	23	8	4	.....	
February, 1874	28	2,430 30	86 48	77 15	127 45	18	10	3	3	
March, 1874	30	2,389 30	79 39	77 30	101 30	26	4	2	.....	
April, 1874	31	3,805 30	122 45	77 15	334 45	14	17	13	6	
May, 1874	32	2,592 10	81 00	65 15	128 00	10	22	22	1	
June, 1874	30	1,981 45	66 03	65 15	89 15	29	1	1	.....	
July, 1874	31	2,101 25	67 47	65 15	89 45	27	4	3	.....	
August, 1874	31	2,127 20	68 37	65 00	89 45	27	4	4	.....	
September, 1874	30	1,999 30	66 39	65 00	89 45	28	2	1	.....	
Whole period	366	28,875 15	78 48	65 00	334 45	285	81	60	10	

* Mails ordered via Grand Junction, Tenn., November 19, 1873.

14.—*Through mails to Washington from New Orleans.*

ROUTE.—From New Orleans, La., via Mobile, Ala., Montgomery, Ala., Calera, Ala., (till May 20, 1874, and thence, after passing Montgomery, Ala., via Atlanta, Ga.,) Dalton, Ga., Cleveland, Tenn., Knoxville, Tenn., Bristol, Tenn., and Lynchburgh, Va., to Washington, D. C.—1,188 miles, (1,216 miles via Atlanta, Ga.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	2,072 25	66 51	62 45	98 10	23	8	7	.....	
November 1873*	30	2,222 00	74 04	60 00	98 10	4	26	26	.....	
December, 1873	31	2,028 00	65 25	60 00	84 00	24	7	7	.....	
January, 1874	31	2,134 45	68 51	60 00	108 00	17	14	14	1	
February, 1874	28	1,916 20	68 26	60 00	99 30	16	12	12	.....	
March, 1874	30	2,253 15	75 06	60 00	124 30	12	18	18	.....	
April, 1874	31	2,819 50	90 57	73 45	147 15	15	16	16	1	
May, 1874	31	2,586 40	83 26	61 00	100 30	6	25	23	2	
June, 1874	30	1,980 10	66 00	63 00	88 00	25	5	2	.....	
July, 1874	31	2,001 50	64 34	63 15	87 40	30	1	1	.....	
August, 1874	31	1,975 45	63 44	63 10	69 00	29	2	.....	.....	
September, 1874	30	1,944 25	64 48	63 15	87 15	27	3	1	.....	
Whole period	365	25,935 25	71 03	60 00	147 15	238	137	127	4	

* Mails ordered via Charlotte, N. C., November 19, 1873.

15.—*Through mails to New Orleans from New York.*

SOUTHWESTERN ROUTE.—From New York, N. Y., via Washington, D. C., Lynchburgh, Va., Bristol, Tenn., Knoxville, Tenn., Cleveland, Tenn., Dalton, Ga., (till May 11, 1874, and thence, after passing Dalton, via Atlanta, Ga.,) Calera, Ala., Montgomery, Ala., and Mobile, Ala., to New Orleans, La.—1,418 miles, (1,446 miles via Atlanta, Ga.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	2,532 00	81 40	79 00	103 15	28	3	3	.....	3
November, 1873 *	30	2,540 05	84 40	79 00	115 15	26	4	3	.....	2
December, 1873	31	2,753 45	88 49	86 15	110 30	27	4	3	.....	3
January, 1874	31	2,925 35	94 22	86 15	158 30	19	12	6	.....	5
February, 1874	28	2,696 45	96 18	86 15	184 45	20	8	4	3	3
March, 1874	30	2,683 30	89 27	86 30	110 30	25	5	3	.....	4
April, 1874	31	4,054 30	130 47	86 15	343 45	14	17	13	6	9
May, 1874	32	2,881 25	90 02	74 15	137 00	10	22	22	.....	4
June, 1874	30	2,301 00	76 42	74 15	98 15	27	3	3	.....	2
July, 1874	31	2,356 35	76 01	74 15	98 45	28	3	2	.....	3
August, 1874	31	2,358 30	76 04	74 00	98 45	29	2	2	.....	4
September, 1874	30	2,318 55	77 17	74 15	98 55	26	4	3	.....	6
Whole period...	366	32,402 35	88 32	74 00	343 45	279	87	67	9	48

* Mails ordered via Grand Junction, Tenn., November 19, 1873.

WESTERN ROUTE.—From New York, N. Y., via Harrisburgh, Pa., Pittsburgh, Pa., Columbus, Ohio, Cincinnati, Ohio, Louisville, Ky., Bowling Green, Ky., Humboldt, Tenn., Grand Junction, Tenn., and Canton, Miss., to New Orleans, La.—1,608 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
ctober, 1873	26	2,029 45	78 04	73 15	110 30	19	7	6	.....	8
ovember, 1873	29	2,236 15	77 06	73 30	101 30	24	5	3	.....	4
ecember, 1873	30	2,381 05	79 22	74 15	98 30	21	9	9	.....	5
nuary, 1874	32	2,550 20	79 41	74 15	100 00	21	11	10	.....	4
bruary, 1874	28	2,315 40	82 42	74 15	172 00	18	10	7	1	5
arch, 1874	31	2,448 40	78 59	74 15	111 20	25	6	5	.....	5
pril, 1874	28	2,686 50	95 57	74 15	233 30	13	15	13	1	6
ay, 1874	32	2,753 15	86 02	76 00	149 00	24	8	8	.....	5
ne, 1874	29	2,512 15	86 37	73 30	148 15	17	12	12	2	5
ly, 1874	31	2,468 55	79 38	71 20	111 00	21	10	10	.....	5
gust, 1874	32	2,618 50	81 50	71 00	157 45	21	11	11	1	4
ptember, 1874	30	2,322 10	77 22	71 15	98 30	20	10	10	.....	3
Whole period...	358	29,324 00	81 54	71 00	233 30	244	114	104	5	59

16.—*Through mails to New York from New Orleans.*

SOUTHWESTERN ROUTE.—From New Orleans, La., via Mobile, Ala., Montgomery, Ala., Calera, Ala. (till May 20, 1874, and thence, after passing Montgomery, via Atlanta, Ga.,) Dalton, Ga., Cleveland, Tenn. Knoxville, Tenn., Bristol, Tenn., Lynchburgh, Va., and Washington, D. C., to New York, N. Y.—1,41[illegible] miles, (1,446 miles via Atlanta, Ga.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	30	2,282 20	76 04	72 25	110 00	25	5	5	.....	[illegible]
November, 1873*	29	2,472 30	85 15	72 40	111 50	5	24	24	.....	[illegible]
December, 1873	33	2,658 10	80 33	72 45	110 15	18	15	15	.....	[illegible]
January, 1874	31	2,550 35	82 16	72 35	113 30	16	15	15	.....	[illegible]
February, 1874	27	2,231 45	82 39	72 40	110 50	12	15	15	.....	[illegible]
March, 1874	30	2,600 55	86 41	72 35	134 00	12	18	18	.....	[illegible]
April, 1874	30	3,083 55	102 47	74 55	159 05	3	27	27	1	[illegible]
May, 1874	32	3,176 50	99 16	72 30	120 50	6	26	26	.....	[illegible]
June, 1874	31	2,374 00	76 34	72 30	101 00	24	7	7	.....	[illegible]
July, 1874	31	2,374 00	76 34	73 30	97 50	25	6	6	.....	[illegible]
August, 1874	30	2,342 00	78 04	73 30	87 00	20	10	10	.....	[illegible]
September, 1874	31	2,470 50	79 42	73 40	97 45	19	12	12	.....	[illegible]
Whole period	365	30,617 50	83 53	72 25	159 05	185	180	180	1	[illegible]

* Mails ordered via Charlotte, N. C., November 19, 1873.

WESTERN ROUTE.—From New Orleans, La., via Canton, Miss., Grand Junction, Tenn., Humboldt, Tenn. Bowling Green, Ky., Louisville, Ky., Cincinnati, Ohio, Columbus, Ohio, Pittsburgh, Pa., and Harrisburgh, Pa., to New York, N. Y.—1,608 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	30	2,514 20	83 48	75 35	120 45	18	12	7	.....	[illegible]
November, 1873	30	2,486 45	82 53	76 20	101 10	17	13	5	.....	[illegible]
December, 1873	31	2,495 45	80 30	77 30	120 20	21	10	5	.....	[illegible]
January, 1874	31	2,620 00	84 30	77 35	121 05	18	13	6	.....	[illegible]
February, 1874	28	2,398 15	85 39	77 45	105 45	15	13	8	.....	[illegible]
March, 1874	31	2,556 40	82 28	78 20	120 40	21	10	3	.....	[illegible]
April, 1874	28	2,755 00	98 23	78 20	145 10	9	19	18	3	[illegible]
May, 1874	31	2,891 30	96 11	82 45	119 40	10	21	21	.....	[illegible]
June, 1874	31	2,819 05	90 56	83 30	111 00	17	14	14	.....	[illegible]
July, 1874	30	2,582 40	86 05	70 55	119 30	12	18	18	.....	[illegible]
August, 1874	31	2,454 25	79 10	75 00	96 40	21	10	2	.....	[illegible]
September, 1874	30	2,273 10	75 43	73 20	77 25	30	.....	.....	.....	[illegible]
Whole period	362	30,847 35	85 12	70 55	145 10	209	153	107	3	[illegible]

17.—*Through mails to Memphis from New York.*

SOUTHWESTERN ROUTE.—From New York, N. Y., via Washington, D. C., Lynchburgh, Va., Bristol, Tenn., Knoxville, Tenn., Chattanooga, Tenn., and Grand Junction, Tenn., to Memphis, Tenn.—1,165 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	1,950 30	62 55	62 00	86 00	29	2	1	.....	1
November, 1873	30	1,884 00	62 48	62 00	86 00	29	1	1	.....	1
December, 1873	31	1,960 25	63 14	62 00	73 30	30	1	1	.....	.....
January, 1874	31	2,133 25	68 49	63 05	135 05	25	6	4	.....	4
February, 1874	28	1,864 35	73 44	63 05	118 30	24	4	2	.....	2
March, 1874	31	2,044 55	65 57	63 05	90 00	27	4	3	.....	2
April, 1874	30	1,990 15	66 20	63 05	114 20	26	4	2	.....	2
May, 1874	31	1,998 35	64 28	64 15	69 00	30	1	.....	.....	.....
June, 1874	30	1,949 50	64 59	64 15	88 15	29	1	1	.....	1
July, 1874	31	1,989 00	63 30	62 30	64 15	31	.....	.....	.....	.....
August, 1874	31	1,989 00	64 09	62 30	86 30	29	2	2	.....	2
September, 1874	30	1,941 05	64 42	61 35	86 35	27	3	3	.....	3
Whole period	365	23,675 35	64 51	61 35	135 05	336	29	20	.....	18

WESTERN ROUTE.—From New York, N. Y., via Harrisburgh, Pa., Pittsburgh, Pa., Columbus, Ohio, Cincinnati, Ohio, Louisville, Ky., Bowling Green, Ky., and Humboldt, Tenn., to Memphis, Tenn.—1,289 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	54	3,298 30	61 05	54 00	76 30	53	1	1	.....	.....
November, 1873	55	3,279 25	59 37	54 00	70 00	55	.....	.....	.....	.....
December, 1873	56	3,204 50	57 13	54 30	70 40	51	5	3	.....	.....
January, 1874	57	3,372 40	59 10	55 10	79 10	55	2	2	.....	.....
February, 1874	51	2,988 30	58 35	54 20	70 30	47	4	.....	.....	.....
March, 1874	55	3,233 55	58 47	53 30	73 00	50	5	1	.....	.....
April, 1874	55	3,599 25	65 37	54 20	104 30	31	24	24	.....	1
May, 1874	58	3,606 50	62 11	54 20	76 15	44	14	14	.....	.....
June, 1874	54	3,183 20	58 57	52 15	68 45	54	.....	.....	.....	1
July, 1874	58	3,372 50	58 09	53 05	90 00	53	5	5	.....	1
August, 1874	57	3,248 45	56 59	53 05	77 05	55	2	2	.....	.....
September, 1874	54	3,034 50	56 12	53 05	68 35	53	1	1	.....	.....
Whole period	664	39,423 50	59 22	52 15	104 30	601	63	53	.....	3

18.—*Through mails to New York from Memphis.*

SOUTHWESTERN ROUTE.—From Memphis, Tenn., via Grand Junction, Tenn., Chattanooga, Tenn., Knoxville, Tenn., Bristol, Tenn., Lynchburgh, Va., and Washington, D. C., to New York, N. Y.—[illegible] miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which mail was not received.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	58	3, 881 40	67 55	60 50	85 35	50	8	7	.....	
November, 1873	32	2, 254 05	70 26	68 00	93 50	28	4	2	.....	
December, 1873	31	2, 155 35	69 32	68 00	92 20	30	1	1	.....	
January, 1874	31	2, 230 25	71 56	68 15	93 45	26	5	3	.....	
February, 1874	28	2, 014 50	71 57	67 35	95 30	22	6	3	.....	
March, 1874	31	2, 243 40	72 22	68 10	94 15	27	4	4	.....	
April, 1874	30	2, 172 15	72 24	67 20	115 20	25	5	3	1	
May, 1874	53	3, 720 55	70 12	67 40	91 45	50	3	2	.....	
June, 1874	51	3, 595 45	70 30	67 40	108 45	43	8	7	2	.....
July, 1874	52	3, 695 10	71 03	67 40	84 50	46	6	5	.....	
August, 1874	49	3, 521 45	71 52	68 00	85 00	41	8	8	.....	
September, 1874	50	3, 685 45	73 42	68 10	95 45	35	15	12	.....	.....
Whole period ...	496	35, 171 50	70 54	60 50	115 20	423	73	57	3	2

WESTERN ROUTE.—From Memphis, Tenn., via Humboldt, Tenn., Bowling Green, Ky., Louisville, Ky., Cincinnati, Ohio, Columbus, Ohio, Pittsburgh, Pa., and Harrisburgh, Pa., to New York, N. Y.—[illegible] miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which mail was not received.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	1, 884 50	60 49	52 00	91 45	16	15	14	.....	
November, 1873	30	1, 771 10	59 02	52 35	71 45	15	15	12	.....	
December, 1873	48	2, 941 35	61 16	54 25	97 50	31	17	12	.....	
January, 1874	55	3, 308 00	60 08	54 30	79 05	33	22	17	.....	
February, 1874	52	3, 232 50	62 10	54 30	90 40	30	22	19	.....	.....
March, 1874	56	3, 378 40	60 20	54 25	99 40	37	19	17	.....	
April, 1874	44	2, 870 15	65 13	54 20	99 35	25	19	19	1	
May, 1874	31	1, 875 40	60 30	54 15	89 15	19	12	12	.....	
June, 1874	34	1, 925 05	56 37	53 30	75 05	30	4	4	.....	.....
July, 1874	50	2, 841 00	56 49	51 40	70 10	42	8	6	.....	
August, 1874	57	3, 250 15	57 01	54 25	75 50	50	7	5	.....	.....
September, 1874	56	3, 105 00	55 26	51 15	63 30	55	1	.....	.....	.....
Whole period ...	544	32, 384 20	59 31	51 15	99 40	383	161	137	1	.....

19.—*Through mails to Cincinnati from Washington.*

ROUTE.—From Washington, D. C., via Cumberland, Md., Grafton, W. Va., and Parkersburgh, W. Va., to Cincinnati, Ohio—612 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	54	1,390 45	25 45	22 45	43 45	50	4	2	.....	1
November, 1873	44	1,123 15	25 31	22 50	47 10	40	4	2	.....	1
December, 1873	45	1,118 15	24 51	22 50	37 30	41	4	1	.....	.....
January, 1874	43	1,104 55	25 41	22 50	40 15	37	6	3	.....	4
February, 1874	39	996 50	25 33	22 50	37 30	33	6	1	.....	.....
March, 1874	32	781 55	24 26	23 30	29 00	29	3	.....	.....	1
April, 1874	30	725 55	24 11	23 30	32 30	28	2	.....	.....	1
May, 1874	50	1,134 10	22 41	21 45	29 15	49	1	.....	.....	1
June, 1874	54	1,194 50	22 07	21 55	25 15	54	.....	.....	.....	.....
July, 1874	57	1,299 40	22 48	21 40	41 30	54	3	1	.....	1
August, 1874	56	1,252 10	22 21	21 40	29 30	55	1	.....	.....	.....
September, 1874	56	1,239 20	22 40	21 40	28 20	55	1	.....	.....	.....
Whole period...	560	13,392 50	23 54	21 40	47 10	525	35	10	.....	9

20.—*Through mails to Washington from Cincinnati.*

ROUTE.—From Cincinnati, Ohio, via Parkersburgh, W. Va., Grafton, W. Va., and Cumberland, Md., to Washington, D. C.—612 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	83	2,042 25	24 36	21 50	33 55	74	9	2	.....	.....
November, 1873	74	2,005 05	27 05	22 10	59 15	68	6	3	.....	.....
December, 1873	79	2,177 25	27 33	24 00	70 00	68	11	4	1	1
January, 1874	81	2,370 15	29 15	20 20	59 15	60	21	9	2	1
February, 1874	73	1,961 40	26 52	23 45	39 30	65	8	3	.....	.....
March, 1874	88	2,312 05	26 16	24 05	36 10	82	6	1	.....	.....
April, 1874	86	2,292 40	26 39	24 05	49 15	80	6	3	.....	1
May, 1874	82	2,015 05	24 34	21 35	35 40	79	3	3	.....	.....
June, 1874	61	1,379 30	22 36	21 35	34 05	58	3	2	.....	.....
July, 1874	59	1,317 15	22 19	20 35	33 45	56	3	3	.....	.....
August, 1874	59	1,327 20	22 29	21 15	28 10	57	2	.....	.....	.....
September, 1874	57	1,270 50	22 17	21 15	26 05	57	.....	.....	.....	.....
Whole period...	882	22,471 35	25 28	20 20	70 00	804	78	33	3	3

21.—*Through mails to Cincinnati from New York.*

ROUTE.—From New York, N. Y., via Harrisburgh, Pa., Pittsburgh, Pa., Steubenville, Ohio, Columbus, Ohio, and Xenia, Ohio, to Cincinnati, Ohio—744 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	82	2,841 05	34 38	28 50	69 00	51	31	8	2	1
November, 1873	71	2,444 50	34 26	29 50	51 00	64	7	3	3	.....
December, 1873	75	2,579 40	34 23	29 55	62 25	65	10	9	2	.....
January, 1874	82	2,763 00	33 41	26 25	58 30	63	19	11	2	.....
February, 1874	72	2,330 25	32 22	29 55	43 30	67	5	2	.....	.....
March, 1874	81	2,606 20	32 10	26 15	57 50	77	4	2	1	...
April, 1874	76	2,400 15	31 34	29 55	37 30	71	5	.....	.....	.....
May, 1874	80	2,531 55	31 38	29 55	37 00	80	.....	.....	.....	.....
June, 1874	74	2,287 50	30 55	29 00	44 20	70	4	1	1	.....
July, 1874	82	2,542 00	31 00	29 30	52 30	79	3	1	.....	.....
August, 1874	81	2,510 50	30 59	29 05	40 30	78	3	.....	.....	.....
September, 1874	76	2,374 20	31 14	29 30	39 20	72	4	.....	.....	.....
Whole period	932	30,212 30	32 25	26 15	69 00	837	95	37	11	1

22.—*Through mails to New York from Cincinnati.*

ROUTE.—From Cincinnati, Ohio, via Xenia, Ohio, Columbus, Ohio, Steubenville, Ohio, Pittsburgh, Pa. and Harrisburgh, Pa., to New York, N. Y.—744 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	79	2,569 20	32 31	29 05	46 15	77	2	1	.....	
November, 1873	79	2,624 50	33 13	30 30	55 15	71	8	4	2	
December, 1873	78	2,707 00	34 42	29 30	65 50	63	15	8	1	...
January, 1874*	29	985 80	33 58	29 45	46 10	21	8	3	.....	
February, 1874	74	2,419 40	32 41	28 10	48 55	67	7	5	1	...
March, 1874	87	2,829 15	32 31	30 20	42 40	81	6	2	.....	...
April, 1874	84	2,766 50	32 56	30 20	50 00	78	6	6	.....	...
May, 1874	85	2,703 05	31 48	28 20	34 35	85	.....	.....	.....	...
June, 1874	78	2,389 30	30 38	24 50	43 35	72	6	1	.....	...
July, 1874	79	2,449 55	31 00	24 15	44 45	70	9	6	.....	...
August, 1874	77	2,349 40	30 30	24 30	44 45	74	3	2	1	...
September, 1874	75	2,275 05	30 20	22 10	37 35	67	8	.....	.....	...
Whole period	904	29,069 40	32 09	22 10	65 50	826	78	38	5	

* No post-bills received at New York from Cincinnati from January 10 to 29, inclusive.

23.—*Through mails to Saint Louis from Washington.*

ROUTE.—From Washington, via Cumberland, Md., Grafton, W. Va., Parkersburgh, W. Va., and Cincinnati, Ohio, to Saint Louis, Mo.—954 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	57	2, 424 40	42 32	37 20	63 45	39	18	3	.....	1
November, 1873	47	2, 153 45	45 49	36 00	61 15	17	30	25	2	1
December, 1873	38	1, 657 40	43 37	36 30	66 15	22	16	16	1	2
January, 1874	46	2, 134 10	46 22	34 30	75 30	18	28	28	.....	2
February, 1874	39	1, 869 20	47 55	36 45	73 15	10	29	29	.....	3
March, 1874	32	1, 295 25	40 28	36 30	61 20	25	7	7	.....	1
April, 1874	30	1, 215 15	40 30	36 30	61 00	23	7	6	.....	1
May, 1874	51	1, 968 05	38 35	33 40	50 05	45	6	4	.....	.....
June, 1874	53	2, 003 20	37 47	36 40	47 40	50	3	1	.....	.....
July, 1874	57	2, 195 55	38 31	34 00	50 00	46	11	4	1	.....
August, 1874	55	2, 102 30	38 13	35 00	59 35	48	7	5	1	.....
September, 1874	56	2, 173 35	38 48	35 15	54 00	49	7	4	1	.....
Whole period ...	561	25, 193 40	44 52	33 40	75 30	392	169	132	6	13

24.—*Through mails to Washington from Saint Louis.*

ROUTE.—From Saint Louis, Mo., via Cincinnati, Ohio, Parkersburgh, W. Va., Grafton, W. Va., and Cumberland, Md., to Washington, D. C.—954 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
tober, 1873	50	2, 039 00	40 46	37 25	50 15	34	16	3	.....	.....
ovember, 1873	50	2, 153 15	43 03	38 40	74 45	37	13	9	.....	.....
ecember, 1873	49	2, 084 00	42 31	39 10	59 25	40	9	7	.....	1
nuary, 1874	58	2, 558 30	44 06	39 05	66 15	38	20	9	.....	1
bruary, 1874	51	2, 093 00	41 02	36 45	57 15	44	7	2	.....	.....
arch, 1874	57	2, 316 55	40 38	39 45	54 45	53	4	1	.....	.....
pril, 1874	50	2, 075 35	41 30	39 45	60 30	42	8	3	.....	1
ay, 1874	53	2, 090 40	39 26	36 10	50 45	46	7	7	.....	2
ne, 1874	58	2, 178 15	37 33	35 55	49 25	55	3	3	.....	.....
ly, 1874	52	2, 015 35	38 45	35 30	49 35	44	8	8	.....	3
ugust, 1874	60	2, 326 40	38 46	35 55	53 45	52	8	6	.....	1
ptember, 1874	57	2, 234 35	39 12	36 05	73 10	51	6	6	2	.....
Whole period ...	645	26, 165 30	40 34	35 30	74 45	536	109	64	2	9

25.—*Through mails to Saint Louis from New York.*

ROUTE.—From New York, N. Y., via Harrisburgh, Pa., Pittsburgh, Pa., Steubenville, Ohio, Columbus, Ohio, Indianapolis, Ind., Terre Haute, Ind., and Mattoon, Ill., (also, after passing Terre Haute, via Vandalia, Ill.,) to Saint Louis, Mo.—1,074 miles, (1,050 miles via Vandalia.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which mails were behind.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	85	4, 220 20	49 39	43 15	86 00	55	30	9	5	.....
November, 1873	74	3, 612 35	48 49	43 55	76 45	55	19	5	4	...
December, 1873	76	3, 783 00	49 46	44 15	76 45	51	25	11	7	...
January, 1874	82	4, 073 40	49 40	43 30	86 00	59	23	10	7	...
February, 1874	74	3, 508 35	47 24	44 15	67 30	61	13	4	.....	...
March, 1874	81	3, 961 05	48 54	44 15	68 15	58	23	10	7	...
April, 1874	80	3, 754 35	46 55	43 30	62 15	68	12	4	3	.....
May, 1874	85	4, 032 55	47 40	44 05	65 50	71	14	7	5	....
June, 1874	75	3, 589 15	47 51	43 40	115 50	60	15	6	2	...
July, 1874	79	3, 712 10	46 59	43 35	71 30	69	10	4	5	....
August, 1874	83	3, 899 05	46 58	43 00	65 00	68	15	5	3	...
September, 1874	77	3, 553 35	46 09	43 30	65 00	70	7	3	.....	
Whole period ...	951	45, 701 10	48 03	43 00	115 50	745	206	78	46	

26.—*Through mails to New York from Saint Louis.*

ROUTE.—From Saint Louis, Mo., via Mattoon, Ill., (also via Vandalia, Ill.,) Terre Haute, Ind., Indianapolis, Ind., Columbus, Ohio, Steubenville, Ohio, Pittsburgh, Pa., and Harrisburgh, Pa., to New York, N. Y.—1,074 miles, (1,050 miles via Vandalia.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which mails were behind.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	54	2, 508 10	46 26	41 05	53 50	50	4	1	.....	
November, 1873	42	1, 917 05	45 38	41 50	60 30	41	1	1	.....	
December, 1873	48	2, 309 30	48 06	42 00	73 35	44	4	1	.....	
January, 1874	54	2, 569 55	47 35	42 15	60 20	46	8	1	.....	
February, 1874	52	2, 391 10	45 59	41 45	53 40	50	2	.....	.....	
March, 1874	57	2, 644 15	46 23	42 10	73 00	55	2	1	1	
April, 1874	50	2, 307 55	46 09	42 05	55 15	49	1	.....	.....	
May, 1874	54	2, 490 25	46 07	42 00	50 20	54	.....	.....	.....	
June, 1874	56	2, 396 25	42 47	39 40	67 00	49	7	3	2	...
July, 1874	51	2, 121 05	41 35	37 00	51 30	43	8	1	.....	
August, 1874	57	2, 418 30	42 25	40 00	60 00	45	12	2	.....	
September, 1874	56	2, 351 40	41 59	37 40	51 15	46	10	2	.....	
Whole period ...	631	28, 426 05	45 02	37 00	73 35	572	59	13	3	

27.—*Through mails to Chicago from Washington.*

ROUTE.—From Washington, D. C., via Parkersburgh, W. Va., and Cincinnati, O., to Chicago, Ill.—873 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	31	1,520 10	49 21	46 30	61 30	.....	31	31	.....	4
November, 1873	36	1,484 00	41 13	36 45	59 30	26	10	8	.....	1
December, 1873	45	1,779 25	39 32	36 30	49 30	37	8	8	.....	.....
January, 1874	45	1,768 35	39 18	36 20	51 30	35	10	5	.....	.....
February, 1874	39	1,480 05	37 57	36 30	40 20	38	1	.....	.....	.....
March, 1874	32	1,218 55	38 05	36 30	41 40	28	4	.....	.....	.....
April, 1874	30	1,128 35	37 37	37 20	38 40	30	.....	.....	.....	.....
May, 1874	51	1,917 25	37 35	36 05	47 45	51	.....	.....	.....	.....
June, 1874	56	2,123 10	37 54	36 15	48 05	56	.....	.....	.....	.....
July, 1874	58	2,196 00	37 51	36 25	48 55	58	.....	.....	.....	.....
August, 1874	57	2,158 00	37 51	36 00	51 05	57	.....	.....	.....	.....
September, 1874	56	2,106 25	37 36	36 25	48 35	56	.....	.....	.....	.....
Whole period	536	20,880 45	38 57	36 00	61 30	472	64	52	.....	5

28.—*Through mails to Washington from Chicago.*

ROUTE.—From Chicago, Ill., via Cincinnati, O., and Parkersburgh, W. Va., to Washington, D. C.—873 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	80	3,056 05	38 12	32 45	49 05	79	1	1	.....	.....
November, 1873	72	2,750 05	38 11	35 30	58 15	62	10	3	.....	.....
December, 1873	76	2,935 45	38 37	34 45	62 10	67	9	3	2	1
January, 1874	81	3,148 15	38 52	35 45	62 10	65	16	2	2	.....
February, 1874	70	2,616 10	37 22	33 00	45 30	64	6	.....	.....	.....
March, 1874	74	2,812 45	38 00	35 45	49 15	65	9	1	1	1
April, 1874	78	2,886 00	37 00	35 45	45 30	75	3	.....	.....	.....
May, 1874	79	2,943 30	37 15	34 30	45 30	78	1	.....	1	.....
June, 1874	72	2,741 45	38 04	35 40	50 30	62	10	3	.....	.....
July, 1874*	37	1,358 35	36 43	34 50	47 50	34	3	3	.....	.....
August, 1874*	3	120 15	40 05	35 00	49 15	2	1	1	.....	.....
September, 1874	71	2,601 20	36 38	34 50	49 10	68	3	3	1	.....
Whole period	793	29,970 30	37 48	32 45	62 10	721	72	20	7	2

* Transmission of post-bill cards interrupted by fire at Chicago.

29.—*Through mails to Chicago from New York.*

ROUTE.—From New York, N. Y., via Harrisburgh, Pa., and Pittsburgh, Pa., (also from New York, N.Y. via Erie, Pa.,) to Chicago, Ill.—901 miles, (964 miles via Erie.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	85	3,115 10	36 38	35 00	42 00	82	3			
November, 1873	82	3,045 10	37 08	35 30	41 30	77	5			4
December, 1873	83	3,142 05	37 51	35 30	49 40	78	5	1		5
January, 1874	85	3,201 35	37 39	35 30	44 30	81	4			4
February, 1874	76	2,846 25	37 27	35 20	41 35	75	1			4
March, 1874	83	3,098 05	37 19	35 10	40 30	83				5
April, 1874	86	3,211 40	37 20	35 25	40 30	86				
May, 1874	85	3,164 10	37 13	34 50	40 15	85				4
June, 1874	80	2,945 35	36 49	34 40	46 25	79	1	1		5
July, 1874	85	3,115 10	36 38	34 40	39 30	85				4
August, 1874	84	3,075 45	36 36	34 30	39 25	84				4
September, 1874	81	2,960 25	36 32	34 35	39 30	81				3
Whole period	995	36,921 15	37 06	34 30	49 40	976	19	2		41

30.—*Through mails to New York from Chicago.*

ROUTE.—From Chicago, Ill., via Pittsburgh, Pa., and Harrisburgh, Pa., (also from Chicago, Ill., via Erie, Pa.,) to New York, N. Y.—901 miles, (964 miles via Erie.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	76	2,912 15	38 19	33 55	50 50	69	7	2		
November, 1873	70	2,727 45	38 58	32 05	56 30	59	11	2		1
December, 1873	69	2,701 50	39 09	35 05	63 40	60	9	1	1	
January, 1874	75	2,935 35	39 08	35 00	48 45	62	13	3	1	
February, 1874	69	2,639 55	38 15	34 55	47 00	64	5	2	1	
March, 1874	72	2,654 15	36 51	34 50	49 45	68	4	3		2
April, 1874	78	2,954 05	37 44	34 25	46 50	77	1	1		
May, 1874	77	2,904 50	37 43	34 45	40 15	77				2
June, 1874	72	2,727 20	37 52	34 20	47 00	68	4	1		
July, 1874*	41	1,540 20	37 34	34 30	50 30	38	3	1	1	
August, 1874*										
September, 1874	77	2,883 50	37 27	33 45	45 30	77				
Whole period	776	29,582 00	38 07	32 05	63 40	719	57	16	4	6

* Transmission of post-bill cards interrupted by fire at Chicago.

31.—*Through mails to Chicago from Boston.*

ROUTE.—From Boston, Mass., via Albany, N. Y., Buffalo, N. Y., Erie, Pa., and Toledo, Ohio, to Chicago, Ill.—1,042 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	81	3,685 05	45 29	39 15	62 30	80	1	.....	.....	.....
November, 1873	76	3,484 50	45 51	39 45	60 40	76	.....	.....	.....	.....
December, 1873	53	2,263 25	42 42	40 10	52 30	53	.....	.....	.....	.....
January, 1874	54	2,303 25	42 39	40 05	52 30	54	.....	.....	.....	.....
February, 1874	48	2,042 35	42 33	37 15	56 35	48	.....	.....	.....	.....
March, 1874	52	2,211 50	42 32	40 10	52 30	52	.....	.....	.....	.....
April, 1874	52	2,240 40	42 19	40 10	53 30	52	.....	.....	.....	.....
May, 1874	53	2,229 55	42 04	39 10	52 25	53	.....	.....	.....	.....
June, 1874	51	2,129 05	41 44	39 00	51 55	51	.....	.....	.....	.....
July, 1874	54	2,248 50	41 38	39 00	52 25	54	.....	.....	.....	.....
August, 1874	53	2,231 55	42 06	39 25	52 15	53	.....	.....	.....	.....
September, 1874	51	2,137 35	41 54	39 10	55 30	51	.....	.....	.....	.....
Whole period...	678	29,169 10	43 01	37 15	62 30	677	1	.....	.....	.....

32.—*Through mails to Boston from Chicago.*

ROUTE.—From Chicago, Ill., via Toledo, Ohio, Erie, Pa., Buffalo, N. Y., and Albany, N. Y., to Boston, Mass.—1,042 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time. occupied.	Average time.	Shortest time.	Longest time.	Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h. m.	h. m.	h. m.	h. m.					
October, 1873	80	3,390 15	42 22	39 00	57 00	80	.....	.....	.....	.....
November, 1873	72	3,194 00	44 21	38 45	90 30	70	2	2	2	.....
December, 1873	74	3,286 40	44 24	38 00	70 00	73	1	1	1	1
January, 1874	79	3,461 35	43 49	37 20	86 55	77	2	2	2	.....
February, 1874	72	3,142 55	43 39	38 15	55 50	71	1	.....	.....	.....
March, 1874	75	3,240 50	43 12	38 15	68 30	73	2	2	2	.....
April, 1874	75	3,248 05	43 18	39 15	84 20	74	1	1	1	.....
May, 1874	79	3,415 40	43 14	39 15	72 20	75	4	4	2	.....
June, 1874	74	3,142 25	42 27	38 45	55 20	74	.....	.....	.....	.....
July, 1874*	41	1,857 05	45 17	38 45	69 00	29	12	3	1	.....
August, 1874*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
September, 1874	77	3,275 20	42 32	38 45	68 00	75	2	2	1	1
Whole period...	798	34,654 50	43 25	37 20	90 30	771	27	17	12	2

* Transmission of post-bill cards interrupted by fire at Chicago.

JOHN L. ROUTT,
Second Assistant Postmaster-General.

RAILWAY MAIL-SERVICE.

SIR: At the close of the fiscal year ending June 30, 1873, there were in operation fifty-nine lines of railway post-office cars, extending over 14,866 miles of railroad, on which was performed 34,925 miles of service daily, and 12,747,625 miles of service annually, by 752 railway post-office clerks. These clerks are classified as follows: 283 head clerks, 379 clerks, and 90 assistant clerks.

CHANGES DURING THE FISCAL YEAR ENDED JUNE 30, 1874.

Lines established.

Double daily service between Baltimore, Md., and Grafton, W. Va., 280 miles.

Daily service between Grafton, W. Va., and Columbus, Ohio, 235 miles.

Double daily service between Grafton, W. Va., and Cincinnati, Ohio, 309 miles.

In January, 1873, the Pennsylvania Central Railroad, New York Central and Hudson River Railroad, New York and Erie Railroad, and certain others, joined in a memorial to the Post-Office Department, giving therein certain rates of compensation for which alone they would furnish postal cars after a certain date therein named.

The Baltimore and Ohio Railroad had previously tendered the Department the full use of their lines, equipped in a manner satisfactory to it.

This was needed to perfect the communication between the Southeast and West and Northwest, and would have partially overcome any delays to the mails had the roads above mentioned put in force their threat.

For these reasons the offer of the Baltimore and Ohio Railroad was accepted and the above lines of railway post-offices established.

Daily service between Cincinnati, Ohio, and Chicago, Ill., 310 miles.

This completes a through line between Washington and Chicago, and forms a connection between the roads centering at Cincinnati, Indianapolis, and Chicago.

Daily service between Indianapolis, Ind., and Galesburgh, Ill., 264 miles.

This was necessitated by the lack of postal facilities upon the Pennsylvania railroad system.

In all five lines, extending over 1,396 miles of railroad, on which is performed 3,970 miles of service daily.

Extensions, &c.

The line between Boston, Mass., and South Berwick, Me., was extended to Portland, Me., 42 miles.

Bloomington, Ill., and Saint Louis, Mo., terminus changed to Mexico, Mo., increasing distance 20 miles.

Chicago, Ill., and Green Bay, Wis., changed to Chicago, Ill., and Fort Howard, Wis., without increase of distance. Sedalia, Mo., and Denison, Tex., extended to Hannibal, Mo., 143 miles.

These extensions cover 205 miles of railroad, on which is performed 410 miles of service daily.

The new line between Indianapolis, Ind., and Galesburgh, Ill., covers that portion of the line between Peoria, Ill., and Burlington, Iowa, between Peoria and Galesburgh, Ill., 53 miles, on which was performed 106 miles of service daily.

Consolidated.

The lines between Freeport and Bloomington, Ill., and Bloomington and Centralia, Ill., were consolidated into one line.

Total increase.

The increase in railway post-office lines is four.
In miles of railroad, 1,548.
In miles of daily service, 4,274.
In miles of annual service, 1,560,010.

Increase in clerical force.

During the year there was an increase of 98 railway post-office clerks, (5 head clerks, 86 clerks, and 7 assistant clerks,) with an annual compensation of $117,200.

Present condition of the railway post-office service.

The railway post-office cars are now in operation on most of the important connecting and trunk lines of railroad, giving the most direct and available transit to the mails between the office of origin and destination, and forming nearly a perfect connection between the various railroads upon which service is performed by route agents.

The Pennsylvania Railroad system is, perhaps, the most extended and important in the country for mail transportation. It is now used to a great extent in the forwarding of through and direct mails, but owing to the poor postal-car facilities at present furnished by that road, it cannot be utilized to any great extent in the distribution of mails in transit.

As this company has expressed its willingness to grant improved accommodations, the benefit to be derived would fully warrant the Department in the acceptance of the same. The necessity of this addition to the postal-car lines can best be judged by the following statement of the bulk of mails passing between the East and West.

New York City originates 55 to 60 tons of mail-matter daily, as shown by their official statement; 45 to 50 tons of this is forwarded on the trunk lines leading to the West and Southwest. Three of these lines, the Pennsylvania Railroad, New York and Erie Railroad, and New York Central and Hudson River Railroad, carry daily over their whole length an average of 93,000 pounds of mail; and as the bulk of this mail is deposited in the offices at the latest hour possible to make the trains, or arrives on connecting trains, it must be distributed in transit, taxing the present accommodations to the utmost, especially as the Erie Railroad is the only one upon which the Department have such accommodations as are required.

The propriety of establishing a fast and exclusive mail-train between New York and Chicago has been discussed for some time, and there appears to be a growing necessity for the same; this train to be under the control of the Department, so far as it is

necessary for the purposes designed, and to run the distance in about 24 hours. It is conceded by railroad officials that this can be done.

The importance of a line like this cannot be overestimated. It would reduce the actual time of the mail between the East and West from 12 to 24 hours. As it would necessarily be established upon one or more of the trunk-lines, having an extended system of connections, its benefits would be in nowise confined, but extended to all parts of the country alike. It would also, should this line be established, be practicable to reduce to one line daily, beside this through line, the service upon the three trunk lines to the West. This reduction would compensate for all the additional expense incurred by the fast mail-train, especially as by the operation of the law governing mail transportation the more mail concentrated upon a single line of railway the less is the aggregate cost of transportation per pound or ton per mile.

The line between Cincinnati and Louisville, via North Vernon, Ind., now established, completes a continuous service between Cincinnati and the railroads centering there and Nashville, Tenn.

THE WITHDRAWAL OF POSTAL CARS FROM THE PHILADELPHIA, WILMINGTON AND BALTIMORE RAILROAD.

In the early part of 1874 the Philadelphia, Wilmington and Baltimore Railroad, over which the New York and Washington railway post-office passes, repeated its demand for increased compensation, and threatened, if it was not complied with, to withdraw the postal cars. The Department was powerless to grant this, as the road was already receiving the maximum compensation under the law regulating the same. Negotiations were entered into to prevent such procedure on the part of the railroad, with, however, no apparent success except to extend the time of such action from July 1 to August 1, 1874.

The company took this ground: It would not refuse the mails in the postal cars, and should they be tendered, it would consider it an acceptance of the terms proposed by them. As this position was clearly untenable, and if the mails were accepted and transported, it could be only upon the terms prescribed by Congress, the Department notified the company that this was their position, and tendered the mails in the postal cars, and they were transported as usual.

To avoid all delays possible, should the company take extreme measures and refuse to transport the mails in postal cars, arrangements were perfected with the Pennsylvania Railroad, so that the mails between Philadelphia, Baltimore, and Washington would have been carried with equal celerity as by the old route, and the only sufferers would have been the communities wholly dependent upon the Philadelphia, Wilmington and Baltimore Railroad and its branches for their mail supplies.

The cause of this trouble.

The cause of this difficulty was not so much in the amount of compensation as in the basis of the same. On the Philadelphia, Wilmington and Baltimore Railroad all the car-space can be utilized. Owing to the peculiar features as to the kind of mail and the connections of the road, a relatively much larger amount of space to weight carried is required than upon any other, and the result is that this road claims there is an inequality between its compensation and the compensation to other roads of the same class.

The remedy.

In this connection it would be advisable to recommend legislation placing the compensation to railroads on other bases than weight alone. When weight was first made the basis of compensation, mails were mostly carried in bulk, or the space required was relatively so small that it did not enter into consideration. But with the increasing railroad facilities and closer connections made at terminal points, came the necessity of distribution in transit, or else delay. Thus has space grown into primary importance, and the relations between the space required and weight carried are becoming so varied on different railroads, governed entirely by the country through which the railroad passes and its connections, that it works unequally, and is an increasing source of complaint upon the part of the railroads who furnish ample accommodations, and of embarrassment to the Department when railroads refuse to furnish the same.

The compensation should be so based that it would command the use of any or all trains run upon any railroad, and ample space for the proper working of the mails. It should be so flexible that mails could be changed from one road to another at the option of the Department, when demanded by a change of connections, &c. This the present law does not admit of. The labor and expense attached to a weighing prevents a frequent repetition. In case of a change of a heavy mail from one road to another, one road would carry what another was paid for, or two roads might be paid for carrying the same mail. Besides, the use of necessary trains is and can be refused, and the car-space furnished for the working of the mails can, and frequently is, so limited as to be almost useless. On no other one thing does the perfection of the railway mail-service, and, in fact, the whole postal service, depend than upon having every accommodation from the railroads that it is possible for them to extend.

Harmony in the distribution and dispatch of mails.

It is of vital importance that the whole distribution and dispatch of mails, in post-offices and upon railroads, be under one general supervision, as with this a harmony and uniformity is to be had, resulting in a maximum of result from a minimum of labor. This is now nominally the case throughout the country, and actually so in by far the greater part of it.

Civil service.

The civil service of this branch of the Department, established previous to the creation of the Civil-Service Commission, and continued as established with its consent, is thoroughly practical and wholly successful. It consists simply of a distribution of mail made at an examination case, similar in every respect to the one made on the cars, or in the post-office when on duty, and a record kept of the same. The improvement under this system is marked.

Each railway post-office clerk, route-agent, or post-office clerk, in making a distribution, is required to attach to each package of letters he makes up a facing or label-slip bearing the address of the package, the office or route upon which it was made up, with the name of the clerk making the distribution.

The clerk receiving and opening this package is required to note

upon these slips all errors of any kind, if any, and forward the slip to the superintendents of their respective divisions, where a record is kept of the work performed by each clerk.

Below are given the return of the slips made on the railway post-offices alone for the month of June, 1873 and 1874:

June, 1873:

Total slips returned, each representing a package of letters	144,[illegible]
Total number of errors found	9,[illegible]
Number packages of letters to each error	1[illegible]
Number letters distributed right to each one wrong	79[illegible]

June, 1874:

Total slips returned	325,[illegible]
Total errors found	10,77[illegible]
Number packages of letters to each error	3[illegible]
Number letters distributed right to each one wrong	1,5[illegible]

A very marked improvement. In this manner a check is kept upon each clerk, and the poor, careless, or inefficient ones soon discovered and made to perform better work or make place for those that will. For it is useless to undertake to give the people what they demand, absolute certainty in their mail facilities, unless those who have the handling of the mails can be educated or controlled in some manner.

Re-organization.

In 1871 the territory of the United States was divided into five divisions, as follows:

FIRST DIVISION.—*Superintendent's headquarters, Boston, Mass.*—Territory: Maine, New Hampshire, Connecticut, Massachusetts, Rhode Island, and Vermont.

SECOND DIVISION.—*Superintendent's headquarters, New York.*—Territory: New York, New Jersey, Pennsylvania, Delaware, Maryland, Eastern Shore of Virginia, and West Virginia.

THIRD DIVISION.—*Superintendent's headquarters, Chattanooga, Tenn.*—Territory: North Carolina, South Carolina, Georgia, Alabama, Tennessee, Kentucky, Mississippi, Louisiana, Texas, Florida, and Virginia, excluding the Eastern Shore.

FOURTH DIVISION.—*Superintendent's headquarters, Chicago, Ill.*—Territory: Illinois, Indiana, Iowa, Michigan, Missouri, Minnesota, Wisconsin, Kansas, Nebraska, New Mexico, Arkansas, Indian Territory, Dakota, Colorado, and Ohio.

FIFTH DIVISION.—*Superintendent's headquarters, San Francisco, Cal.*—Territory: California, Oregon, Idaho, Montana, Nevada, Utah, Washington, Arizona, and Wyoming.

To each of these divisions was assigned an assistant superintendent of railway mail-service, as superintendent of division.

To these superintendents was delegated the supervision of all the details of service in their respective divisions.

The great territorial extent and vast railroad mileage of some of these divisions made it almost impracticable for the respective superintendents to give all that close personal supervision necessary to make and maintain a perfect service. Many of the lines of railroad could not be visited at all, or else at wide intervals, and the same of the post-offices. In view of all this, the increasing mails, number of post-offices, and mileage of railroads, a reorganization seemed to be imperative, and was accordingly recommended to and made by the Postmaster-General, as shown in the following order:

POST-OFFICE DEPARTMENT,
Washington, D. C., October 9, 1874.

Ordered, That from and after this date the officers in charge of the railway mail service shall consist of one general superintendent, one assistant superintendent, and eight superintendents, assigned to duty as hereinafter mentioned.

That the divisions of the railway mail-service shall be eight in number, each composed of the several States and Territories hereinafter stated. The superintendents

named in this order are assigned to duty in such divisions, with headquarters at the points mentioned. The general superintendent is directed to arrange all the details necessary to carry this order into effect and full force, subject to the approval of the Postmaster-General.

Office of General Superintendent of Railway Mail-Service, Washington, D. C., George S. Bangs, general superintendent.

M. V. Bailey, chief clerk, and in charge of third division.

T. N. Vail, assistant superintendent railway mail-service, in charge of schemes for general distribution, statistics, &c.

First division—comprising the New England States. Thomas P. Cheney, superintendent, Boston, Mass.

Second division—comprising New York, New Jersey, Pennsylvania, Delaware, and the Eastern Shore of Maryland. Roswell Hart, superintendent, New York, N. Y.

Third division—comprising Maryland, (excluding the Eastern Shore,) Virginia, West Virginia, and the District of Columbia. M. V. Bailey, superintendent, Washington, D. C.

Fourth division—comprising North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana. L. M. Terrell, superintendent, Atlanta, Ga.

Fifth division—comprising Ohio, Indiana, Kentucky, and Tennessee. C. Jay French, superintendent, Cincinnati, Ohio.

Sixth division—comprising Michigan, Wisconsin, Illinois, Iowa, Nebraska, Minnesota, and the Territories of Dakota and Wyoming. James E. White, superintendent, Chicago, Ill.

Seventh division—comprising Missouri, Kansas, Arkansas, Texas, and the Territories of Colorado, Indian, and New Mexico. W. L. Hunt, superintendent, Saint Louis, Mo.

Eighth division—comprising California, Nevada, Oregon, and the Territories of Alaska, Arizona, Idaho, Montana, Utah, and Washington. I. A. Amerman, superintendent, San Francisco, Cal.

MARSHALL JEWELL,
Postmaster-General.

COST OF THE RAILWAY POST-OFFICE SERVICE.

The additional compensation given to the railroads for furnishing and transporting railway post-office cars is, as nearly as can be estimated, $600,000 annually. The compensation of clerks performing this service is $1,058,200 annually. The cost of superintendency, for salary and per diem, is $34,420. A total cost of $1,692,620.

That this cost is apparent, however, and not real, will be seen in the following:

The railway post-offices, with three or four exceptions, perform the way or local service, that is, supply the offices along the line of railroad over which they pass. A careful estimate shows that to do this work would alone require 370 clerks or route-agents, which would cost, at $1,000 each per year, (the average salary given on that class of routes,) $370,000.

Again, were not this distribution made on the cars, it would necessitate the establishment of at least 50 additional distributing post-offices, employing from one additional clerk in the smallest to 75 in the largest. This latter is the estimate for Chicago.

That it would require a larger force in the offices than on the cars to make the distribution of the same amount of mail is evident from the following reason:

On the cars they have the whole time in transit, while in the post-office the distribution must be made in the shortest possible time, requiring larger force, in order that it may be forwarded by the first departing trains after its arrival. This must at least offset the balance of compensation to clerks. The additional space required in the post-offices would alone aggregate to no inconsiderable item.

The new superintendency would be necessary under any system, as the distribution and dispatch of mails would require the same general supervision as now to secure the best possible results. Not the least considera-

tion in favor of the railway post-office is the avoidance of delays resulting from any other system than the distribution of mails in transit.

These have all been set forth at length in the letter of the Postmaster-General in answer to a Senate resolution of inquiry. (Ex. Doc. No. 37, 43d Congress, 1st session.)

In closing, it is due to the railway post-office clerks and route-agents employed on railways throughout the country, that the faithfulness with which they have performed their arduous and at times perilous duties be commended. This hearty co-operation on their part is reflected by the efficiency of the mail-service in all sections of the Union.

Very respectfully,

GEO. S. BANGS,
General Superintendent.

Hon. J. L. ROUTT,
Second Assistant Postmaster-General.

STATEMENTS SHOWING OPERATIONS AND RESULTS OF FOREIGN-MAIL SERVICE FOR THE FISCAL YEAR ENDED JUNE 30, 1874.

The postages on United States and European mails were as follows:

The aggregate amount of postage (sea, inland, and foreign) on the mails exchanged—	
With the United Kingdom	$794,630 45
With Germany	399,811 87
With France	16,125 90
With Belgium	13,992 39
With the Netherlands	22,129 48
With Italy	44,947 55
With Switzerland	38,863 75
With Denmark	20,543 38
With Norway	34,614 75
With Sweden	53,141 13
Total postages	$1,438,800 65

Being an increase of $32,293.15 over the amount reported for the previous year.

The postages on mails *sent* to Europe were as follows, viz:

To the United Kingdom	$426,530 05
To Germany	213,259 95
To France	6,467 20
To Belgium	6,540 62
To the Netherlands	11,488 98
To Italy	19,846 24
To Switzerland	18,711 28
To Denmark	10,063 28
To Norway	17,797 67
To Sweden	25,139 13
Total	$755,844 40

The postages on mails *received* from Europe were as follows, viz:

From the United Kingdom	$368,100 40
From Germany	186,551 92
From France	9,658 70
From Belgium	7,451 77
From the Netherlands	10,640 50
From Italy	25,101 31
From Switzerland	20,152 47
From Denmark	10,480 10
From Norway	16,817 08
From Sweden	28,002 00
Total	$682,956 25

Postages collected in the United States	$869,964 85
Postages collected in Europe	568,835 80
Excess of collections in the United States	$301,129 05

Number of letters (single rates) *sent* from the United States	10,556,836
Number of letters (single rates) *received* from Europe	9,410,206
Total	19,967,042

Being an increase of 381,528 over the number reported for the previous year.

The excess of postages on mails *sent* from the United States to different countries of Europe, over that on mails *received* from the same countries, was as follows:

United Kingdom	$58,429 65
Germany	26,708 03
Netherlands	848 45
Norway	960 59
Total	$86,966 75

The excess of postages on mails *received* over those on mails *sent* was as follows:

France	$3,191 58
Belgium	911 15
Italy	5,255 07
Switzerland	1,441 19
Denmark	416 [illegible]
Sweden	2,862 [illegible]
Total	$14,078 60

Number of letters and amounts of postage on mails conveyed to and from Europe by the respective steamship-lines.

Name of line.	Number of letters.			Amounts of postage on letter-mails.		
	Sent.	Received.	Total.	Sent.	Received.	Total.
Hamburg	2,475,802	1,258,337	3,734,139	$183,827 67	$97,524 95	$281,352 6[illegible]
North German Lloyd	2,199,971	2,525,315	4,725,286	168,896 42	188,800 58	357,69[illegible]
Inman	74,736	2,273,972	2,348,708	4,725 73	162,612 94	167,33[illegible]
White Star	1,647,568	16,922	1,664,490	108,266 53	1,102 40	109,36[illegible]
Williams & Guion	2,346,928	66	2,346,994	163,262 39	3 34	163,265 [illegible]
Cunard	1,276,656	3,244,346	4,521,002	88,927 50	224,434 99	313,362 [illegible]
Eagle	210,236	13,836	224,072	16,751 77	1,056 24	17,80[illegible]
Canadian	282,612	1,806	284,418	17,567 94	109 40	17,67[illegible]
Red Star	490	3,701	4,191	28 40	228 42	25[illegible]
Netherlands, American St. Nav. Co	574	2,613	3,187	34 44	165 59	20[illegible]
American Steamship Co	15,528	330	15,858	994 96	26 32	1,02[illegible]
General Transatlantic	25,404	68,611	94,015	2,540 40	6,861 10	9,40[illegible]
Baltic Lloyd	331	334	665	20 25	28 94	[illegible]
National Line	....	17	17	....	1 74	1 [illegible]
Total	10,556,836	9,410,206	19,967,042	755,844 40	682,956 25	1,438,80[illegible]
Increase over 1873	283,125	98,403	381,528	41,133 36	....	32,29[illegible]
Decrease	....	....	....	....	8,840 21	....

Payments during fiscal year ended June 30, 1874, *to ocean-steamship lines transporting mails for the sea-postages as compensation for the service.*

Hamburg line		$52,2[illegible]
North German Lloyd line		41,4[illegible]
Inman line		1,[illegible]
White Star line		40,709 [illegible]
Williams & Guion line		58,276 [illegible]
Cunard line		29,521 [illegible]
Eagle line		3,[illegible]
Canadian line		6,731 [illegible]
Red Star line		17 74
Netherlands, Ameaican Steam Navigation Company		13 [illegible]
American Steamship Company's line		701 1[illegible]
		235,373 [illegible]
To Pacific Mail Steamship Company	$26,356 50	
To West Indies, Mexico, Brazil, Bermuda, New Granada, and New Zealand	68,855 02	
To Nova Scotia	1,759 59	
		96,971 [illegible]
Total		$332,341 [illegible]

have concluded postal conventions.

Countries.	LETTER-MAILS.						PRINTED MATTER AND SAMPLES.						Total weight of mails exchanged with European countries.	
	From the United States.		To the United States.		Total.		From the United States.		To the United States.		Total.			
	Grams.	Ounces.	Grams.	Ounces.	Grams.	Ounces.	Grams.	Ounces.	Grams.	Ounces.	Grams.	Ounces.	Grams.	Ounces.
United Kingdom	.....	2, 042, 596½	.....	1, 822, 668½	.....	3, 865, 265½	.....	7, 990, 612½	.....	11, 338, 652½	.....	19, 329, 264½	.....	23, 194, 530
Germany	29, 136, 179	.....	24, 072, 815	.....	53, 208, 994	.....	73, 232, 564	.....	27, 564, 025	.....	100, 796, 589	.....	154, 005, 583	.....
France	681, 250	.....	749, 549	.....	1, 430, 799	.....	11, 955, 460	.....	1, 178, 428	.....	13, 133, 888	.....	14, 564, 687	.....
Belgium	739, 241	.....	718, 887	.....	1, 458, 128	.....	2, 242, 806	.....	2, 680, 521	.....	4, 923, 327	.....	6, 381, 455	.....
Netherlands	1, 092, 247	.....	902, 076	.....	1, 994, 323	.....	1, 955, 700	.....	1, 714, 797	.....	3, 670, 497	.....	5, 664, 820	.....
Switzerland	1, 760, 335	.....	1, 579, 163	.....	3, 339, 498	.....	6, 237, 460	.....	3, 398, 480	.....	9, 635, 940	.....	12, 975, 438	.....
Italy	1, 641, 797	.....	1, 513, 308	.....	3, 155, 105	.....	4, 828, 753	.....	2, 269, 612	.....	7, 098, 365	.....	10, 253, 470	.....
Denmark	1, 277, 077	.....	1, 157, 519	.....	2, 434, 596	.....	1, 030, 056	.....	1, 449, 634	.....	2, 479, 690	.....	4, 914, 286	.....
Sweden	2, 377, 039	.....	1, 583, 849	.....	3, 960, 888	.....	1, 771, 531	.....	973, 759	.....	2, 745, 290	.....	6, 706, 178	.....
Norway	1, 579, 266	.....	1, 122, 551	.....	2, 701, 817	.....	1, 346, 588	.....	482, 915	.....	1, 829, 503	.....	4, 531, 320	.....
Total grams and equivalent in ounces	40, 284, 431	1, 422, 850	33, 399, 717	1, 179, 680	73, 684, 148	2, 602, 530	104, 600, 918	3, 694, 513½	41, 712, 171	1, 473, 277½	146, 313, 089	5, 167, 791	219, 997, 237	7, 770, 321
Total	.....	3, 465, 446½	.....	3, 002, 348½	.....	6, 467, 795½	.....	11, 685, 126	.....	12, 811, 929½	.....	24, 497, 055½	.....	30, 964, 851
Increase over 1873	.....	79, 581½	.....	30, 787½	.....	110, 369½	.....	677, 698	.....	970, 421½	.....	1, 648, 119½	.....	1, 758, 489

Number of letters and newspapers and amounts of United States postage (so far as reported) on mails exchanged with Canada, the West Indies, &c.

Country.	Number of letters.	Number of newspapers.	United States postage.
British provinces	7, 034, 390	1, 744, 276	$227, 095 64
West India Islands	876, 441	398, 577	95, 615 57
Panama and Central America	207, 356	296, 022	31, 632 49
China and Japan	224, 354	313, 763	31, 365 30
Brazil	96, 031	82, 424	16, 317 34
Sandwich Islands, New Zealand, and Australia	72, 220	100, 522	6, 085 90
Mexico	51, 922	59, 602	5, 033 01
Ecuador	6, 214	7, 319	1, 369 12
New Granada	15, 120	5, 984	1, 530 36
Venezuela	5, 427	2, 459	569 55
Total	8, 589, 475	2, 870, 948	$416, 625 [illegible]

POSTAL CONVENTION BETWEEN THE UNITED STATES OF AMERICA AND THE COLONIAL GOVERNMENT OF NEW SOUTH WALES.

The undersigned, being thereunto duly authorized by their respective governments, have agreed upon the following articles, establishing and regulating the exchange of correspondence between the United States of America and the colony of New South Wales.

ARTICLE 1.

There shall be an exchange of correspondence between the United States of America and New South Wales, by means of the direct line of colonial mail-packets plying between San Francisco and said colony, as well as by such other means of direct mail-steamship transportation between the United States and New South Wales as shall hereafter be established, with the approval of the respective Post Departments of the two countries, comprising letters, newspapers, printed matter of every kind, and patterns and samples of merchandise, originating in either country, and addressed to and deliverable in the other country, as well as correspondence in closed mails originating in New South Wales and destined for foreign countries by way of the United States.

ARTICLE 2.

The post-office of San Francisco shall be the United States office of exchange, and Sydney the office of exchange of the colony of New South Wales, for all mails transmitted under this arrangement.

ARTICLE 3.

No accounts shall be kept between the Post Departments of the two countries upon the international correspondence, written or printed, exchanged between them, but each country shall retain to its own use the postages which it collects.

The single rate of international letter-postage shall be twelve cents in the United States, and sixpence in New South Wales, on each letter weighing half an ounce or less, and an additional rate of twelve cents (sixpence) for each additional weight of half an ounce or fraction thereof, which shall, in all cases, be prepaid at least one single rate, by means of postage-stamps, at the office of the mailing in either country. Letters unpaid or prepaid less than one full rate of postage shall not be forwarded, but insufficiently-paid letters, on which a single rate or more has been prepaid, shall be forwarded, charged with the deficient post age, to be collected and retained by the Post Department of the country of destination. Letters fully prepaid, received in either country from the other, shall be delivered free of all charge whatsoever.

The United States post-office shall levy and collect to its own use on newspapers addressed to or received from New South Wales a postage-charge of two cents, and on all other articles of printed matter, patterns and samples of merchandise, addressed to or received from New South Wales, a postage-charge of four cents per each weight of four ounces or fraction of four ounces.

The post-office of New South Wales shall levy and collect to its own use on newspapers and other articles of printed matter, patterns and samples of merchandise, addressed to or received from the United States, the regular rates of domestic postage chargeable thereon by the laws and regulations of the colony of New South Wales.

Newspapers and all other kinds of printed matter, and patterns and samples of merchandise, are to be subject to the laws and regulations of each country respectively, in regard to their liability to be rated with letter-postage, when containing written matter, or for any other cause specified in said laws and regulations, as well as in regard to their liability to customs-duty under the revenue-laws.

ARTICLE 4.

The United States office engages to grant the transit through the United States, as well as the conveyance by United States mail-packets, of the correspondence in closed mails which the New South Wales post-office may desire to transmit via the United States to British Columbia, the British North American Provinces, the West Indies, Mexico, Central and South America, and at the following rates of United States transit-postage, viz:

For the United States territorial transit of closed mails from New South Wales for Mexico, British Columbia, Canada, or other British North American Provinces, when transmitted entirely by land-routes, six cents per ounce for letter-mails and sixteen cents per pound for all kinds of printed matter.

For the United States territorial and sea transit of closed mails from New South Wales for British Columbia or other British North American Provinces, Mexico, Central and South America, or the West India Islands, when transmitted from the United States by sea, twenty-five cents per ounce for letter-mails and twenty cents per pound for all kinds of printed matter.

The New South Wales post-office shall render an account to the United States post-office, upon letter-bills to accompany each mail, of the weight of the letters, and also of the printed and other matter contained in such closed mails forwarded to the United States for transmission to either of the above-named countries and colonies, and the accounts arising between the two offices on this class of correspondence shall be stated, adjusted, and settled quarterly, and the amounts of the United States transit-charges found due on such closed mails shall be promptly paid over by the New South Wales post-office to the United States post-office, in such manner as the Postmaster-General of the United States shall prescribe.

ARTICLE 5.

Prepaid letters from foreign countries, received in and forwarded from the United States to New South Wales, shall be delivered in said colony free of all charges whatsoever, and letters received in New South Wales from the United States, addressed to other colonies of Australia, will be forwarded to destination, subject to the same conditions as are applicable to correspondence originating in New South Wales and addressed to those countries.

ARTICLE 6.

In the event of any of the Australian colonies not agreeing with New South Wales and New Zealand to contribute to the maintenance of any line of mail-packets plying between New South Wales and New Zealand and the United States of America, and subsidized by New South Wales and New Zealand, the New South Wales post-office may require the United States post-office not to forward by such subsidized packets

any mails, letters, newspapers, or other articles addressed to such colony; and the New South Wales post-office may refuse to transmit to their destination all mails, letters, newspapers, or other printed matter addressed to such colony and received in New South Wales from the United States by such subsidized packets; and may refuse to forward to their destination by such subsidized packets all mails, letters, newspapers, or other printed matter received in New South Wales from such colony and addressed to the United States of America or elsewhere.

ARTICLE 7.

The two Post Departments may, by mutual agreement, provide for the transmission of registered articles in the mails exchanged between the two countries.

The register-fee for each article shall be ten cents in the United States and fourpence in New South Wales.

ARTICLE 8.

The two Post Departments shall settle, by agreement between them, all measures of detail and arrangement required to carry this convention into execution, and may modify the same in like manner from time to time as the exigencies of the service may require.

ARTICLE 9.

Every fully-prepaid letter dispatched from one country to the other shall be plainly stamped with the words "Paid all," *in red ink*, on the right-hand upper corner of the address, in addition to the date-stamp of the office at which it was posted; and on insufficiently-paid letters the amount of the deficient postage shall be inscribed in *black ink*.

ARTICLE 10.

Dead-letters, which cannot be delivered from whatever cause, shall be mutually returned without charge, monthly, or as frequently as the regulations of the respective offices will permit.

ARTICLE 11.

This convention shall come into operation on the first day of February, 1874, and shall be terminable at any time on a notice by either office of six months.

Done in duplicate and signed in Washington the fifteenth day of January, in the year of our Lord one thousand eight hundred and seventy-four.

[SEAL.] JNO. A. J. CRESWELL,
Postmaster-General of the United States.

[SEAL.] SAML. SAMUELS,
Postmaster-General of New South Wales.

I hereby approve the aforegoing convention, and in testimony thereof have caused the seal of the United States to be affixed.

[SEAL.] U. S. GRANT.

By the President:

HAMILTON FISH,
Secretary of State.

WASHINGTON, *January* 15, 1874.

ADDITIONAL ARTICLES OF AGREEMENT BETWEEN THE POST-OFFICE DEPARTMENT OF THE UNITED STATES OF AMERICA AND THE POSTAL ADMINISTRATION OF SWITZERLAND FOR AN EXCHANGE OF POSTAL CARDS BETWEEN THE TWO COUNTRIES.

ARTICLE 1.

For the purpose of providing additional facilities of mail communication between the United States of America and Switzerland, it is hereby mutually agreed that United States postal cards, mailed at any post-office in the United States and addressed to Switzerland, and Swiss postal cards mailed at any post-office in Switzerland and addressed to the United States, the postage on which shall have been fully prepaid to destination at the rates hereinafter stated, can henceforth be exchanged between the inhabitants of the United States and of Switzerland. But unpaid or insufficiently-paid postal cards will not be forwarded in the mails between the two countries.

ARTICLE 2.

Postal cards shall be forwarded exclusively by means of such direct steamers as shall from time to time be employed in the transportation of the direct German-American mails between New York and Bremen or Hamburg. Each of the two Post Departments shall pay the entire expenses of the intermediate sea and territorial transport of the postal cards which are sent from its territory.

ARTICLE 3.

The postage on postal cards sent in each direction is fixed as follows:

1. At 2 cents when sent from the United States of America.
2. At 10 centimes when sent from Switzerland.

Each Department shall retain to its exclusive use the postage which it collects at the prescribed rates on the postal cards sent from its territory.

ARTICLE 4.

The regulations and instructions governing the use and treatment of postal cards in the domestic mail of the United States and of Switzerland, respectively, shall apply equally to the postal cards mailed in either country and addressed to the other country.

ARTICLE 5.

This agreement shall go into effect on the 1st of May, 1874, and shall have equal duration with the postal convention of 11th October, 1867, and with the additional conventions concluded thereto.

Done in duplicate and signed in Washington the 21st April, 1874, and in Berne the 31st March, 1874.

[L. S.] JNO. A. J. CRESWELL.
Postmaster-General of the United States.

The Federal Post-Department:

[L. S.] EUGÈNE MOREL.

I hereby approve the aforegoing additional articles, and in testimony thereof I have caused the seal of the United States to be affixed.

[L. S.] U. S. GRANT.

By the President:

HAMILTON FISH,
Secretary of State.

WASHINGTON, *April 21st*, 1874.

POSTAL CONVENTION BETWEEN THE UNITED STATES OF AMERICA AND THE REPUBLIC OF FRANCE.

The undersigned, John A. J. Creswell, Postmaster-General of the United States of America, in virtue of the powers vested in him by law, and M. Amédée Bartholdi, officer of the national order of the Legion of Honor, Envoy Extraordinary and Minister Plenipotentiary from France at Washington, &c., &c., in the name of his government and by virtue of the powers which he has formally presented to this effect, have agreed upon the following articles, viz:

ARTICLE I.

There shall be between the postal administration of France and the postal administration of the United States an exchange, in closed mails, of letters, samples of merchandise, photographs, and printed matter of all kinds, by the following means of communication and transportation, viz:

1st. By the French mail-packets.

2d. By the packets of the Hamburg line.

3d. By the way of England and the packets employed in transporting the mails between Great Britain and the United States.

The expenses arising from the transportation of the mails by any one of the above-mentioned routes shall be defrayed by the dispatching office; but it is understood that these expenses shall be defrayed in both directions by that of the two administrations which is able to secure the transportation upon the most favorable terms, the other administration to reimburse to it its share of the said expenses.

The United States postal administration, however, shall pay to the postal administration of France, for the conveyance of the mails sent from the United States to France by means of the French packets, the same sea-rates as those which the said United States postal administration would pay, according to American legislation, for the maritime conveyance of the same mails by steamers of commerce. It is also understood that these rates are not to be lower than those which the postal administration of France shall have to pay for the conveyance by the Hamburg packets of the mails which it shall send by these packets to the United States.

ARTICLE II.

Persons who desire to send ordinary, that is to say not registered, letters, either from France and Algeria, for the United States and its territories, or from the United States and its territories for France and Algeria, may, at their option, leave the postage on said letters to be paid by the addressees, or they can prepay said postage to destination.

ARTICLE III.

The charge to be levied in France upon letters originating in or addressed to the United States shall be 50 centimes per 10 grammes or fraction of 10 grammes, under the reservation for the French government of the power of hereafter applying the progression of 15 grammes. The charge to be levied in the United States upon letters originating in or addressed to France shall be 9 cents per 15 grammes or fraction of 15 grammes. Independently of the charges mentioned above, a fixed fee of 25 centimes, or 5 cents, as the case may be, shall be levied upon the unpaid letters.

In regard to the letters insufficiently paid by means of postage-stamps, they shall be treated as unpaid letters, saving deduction of the amount of the postage-stamps; but when the charge resulting from this deduction shall give a fraction of half décime French, or of a cent American, an entire half décime or cent, as the case may be, shall be levied for the fraction.

ARTICLE IV.

The public of the two countries may send letters, registered, from one country to the other.

The postage on such registered letters must always be prepaid to destination.

Every registered letter sent from France and Algeria to the United States and its territories shall bear, on departure, in addition to the postage applicable to an ordinary paid letter of the same weight, a fixed fee of 50 centimes; and, reciprocally, every registered letter sent from the United States and its territories to France and Algeria shall bear, on departure, in addition to the postage applicable to a paid letter of the same weight, a fixed fee of 10 cents.

ARTICLE V.

Samples of merchandise or of grains, photographs, engravings, and lithographs, newspapers, periodicals, sewed or bound books, pamphlets, sheets of music, catalogues, prospectuses, announcements, and various circulars, printed, engraved, lithographed, or autographed, which shall be sent either from France and Algeria to the United States and its territories, or from the United States and its territories to France and Algeria, must be prepaid, on both sides, to destination.

The rates of prepayment shall be fixed by the government of the country of origin.

ARTICLE VI.

Each administration shall retain the whole amount of the sums which it shall have collected by authority of Articles III, IV, and V preceding.

It is formally agreed, between the two contracting parties, that such objects as are designated in the said articles, which shall have been prepaid to destination, cannot, under any pretext or title whatever, be subjected, in the country of destination, to any postage or fee to the charge of the addressees.

ARTICLE VII.

The two administrations may reciprocally deliver in open mails ordinary letters and printed matter of all kinds coming from or addressed to the countries to which they serve respectively as intermediaries; and

also registered letters coming from or addressed to such of those countries to which the payment of ordinary letters can be effected to destination.

This delivery shall take place according to the following arrangements:

The correspondence exchanged between France or Algeria and the countries to which the United States serve as intermediaries shall be made subject to the following settlements:

1st. To the payment by the French administration, to the American administration, when the postage shall be collected in France or Algeria, of a rate of postage equal to that which is paid by the inhabitants of the United States for the correspondence which they exchange with the same countries.

2d. To the payment by the American administration to the French administration, when the postage shall be collected in the countries to which the United States serve as intermediaries, of a rate of French postage of 4 cents per 10 grammes or fraction of 10 grammes for ordinary letters, of 8 cents per 10 grammes or fraction of 10 grammes for registered letters, and of 1 cent per 40 grammes or fraction of 40 grammes for printed matter of all kinds.

Reciprocally the correspondence exchanged between the United States and the countries to which France serves as intermediary, shall be made subject to the following settlements:

1st. To the payment by the American administration to the French administration, when the postage shall be collected in the United States, of a rate of postage equal to that which is paid by the inhabitants of France and Algeria for correspondence which they exchange with the same countries.

2d. To the payment by the French administration to the American administration, when the postage shall be collected in the countries to which France serves as intermediary, of an American rate of postage of 20 centimes per 15 grammes or fraction of 15 grammes for ordinary letters; and of 40 centimes per 15 grammes or fraction of 15 grammes for registered letters, and of 5 centimes per 40 grammes or fraction of 40 grammes for printed matter of all kinds.

The correspondence exchanged between the countries to which France serves as intermediary and the countries to which the United States serve as intermediaries, shall be made subject to the following settlements:

1st. To the payment by the French administration to the American administration, if the postage on the correspondence is collected in the countries to which France serves as intermediary, of a rate of postage equal to the postage paid by the inhabitants of the United States for the correspondence which they exchange with the countries to which the United States serve as intermediaries.

2d. To the payment by the American administration to the French administration, if the postage on the correspondence is collected in the countries to which the United States serve as intermediaries, of a rate of postage equal to that paid by the inhabitants of France and Algeria for the correspondence which they exchange with the countries to which France serves as intermediary.

The expenses of intermediate transportation between France and the United States of the correspondence to which apply the provisions of the present article shall be defrayed by that of the two postal administrations of France or of the United States by which, or on the side of which, the postage shall be collected.

ARTICLE VIII.

Samples of merchandise shall not be admitted to the benefits of a reduced rate, unless they are in themselves of no commercial value, unless they are placed under band, or in such a manner as to leave no doubt of their nature, and unless they bear no other writing by the hand than the address, a mark of fabric or of the merchant, numbers of order, and price.

In order to benefit by a reduced rate, the photographs and printed matter mentioned in Articles V and VII should also be placed under band, and bear no writing, figure, or sign whatever, made by hand, except the address, the signature of the sender, or a date.

The samples of merchandise, photographs, and printed matter which do not fulfill the conditions mentioned above, or which have not been prepaid to the fixed limit, shall be considered as letters, and charged accordingly.

It is understood that the provisions contained in the present article, and in Articles V and VII preceding, do not impair in any manner the right of the postal administrations of the two countries not to permit upon their respective territories the transportation and distribution of photographs, lithographs, engravings, and printed matter, which are not in accordance with the laws, ordinances, or decrees which regulate the conditions of their publication and circulation both in France and in the United States.

ARTICLE IX.

The postal administrations of France and of the United States shall not admit to destination in either of the two countries, or in the countries using their intermediary, any package or letter containing gold or silver money, jewels, or articles of intrinsic value, or any object subject to customs-duty.

Liquids and articles which may injure the correspondence, and which are prohibited in the country of destination, shall not be admitted under any form to be dispatched through the post-office.

No package of more than 60 centimetres or 2 feet, American, in length, and of more than 30 centimetres or 1 foot, American, in the other dimensions, can be sent from one of the two countries to the other through the post-office.

ARTICLE X.

The French government agrees to cause to be transported, in closed mails, either across France or by means of the French maritime postal service, the correspondence which the postal administration of the United States may desire to exchange with other countries by the intermediary of the French post-office; and reciprocally the Government of the United States agrees to cause to be transported, in closed mails, either across the United States or by means of American maritime postal services, the correspondence which the postal administration of France may desire to exchange with other countries by the intermediary of the United States post-office.

The postal administration of France shall pay to the postal administration of the United States, viz:

1st. The sum of 6 francs per kilogramme on letters, and 1 franc per kilogramme on samples and prints, for the transportation across the territory of the United States of the closed mails which shall be exchanged between France and other countries via San Francisco.

2d. The sum of 10 francs per kilogramme on letters, and 1 franc per kilogramme on samples and printed matter, for the transportation across the territory of the United States of the closed mails which shall be exchanged by any other route than that of San Francisco between France and its colonies, or all other places where it shall have postal establishments, or the countries with which it is at present bound by postal conventions.

Reciprocally the postal administration of the United States shall pay to the postal administration of France, viz:

1st. The sum of $1.20 per kilogramme on letters, and 20 cents per kilogramme on patterns and printed matter, for the transportation across French territory of the closed mails which shall be exchanged between the United States and other States by the Franco-Belgian or Franco-German frontier.

2d. The sum of $2 per kilogramme on letters, and 20 cents per kilogramme on samples and prints, for the transportation across French territory of the closed mails which shall be exchanged by all other points of the French frontier than those contiguous to Germany or to Belgium between the United States and the countries with which the Government of the United States is at present bound by postal conventions.

When the closed mails coming from or addressed to France shall be transported between the French frontier and the American frontier by the packets of the Hamburg line, the postal administration of France shall pay to the postal administration of the United States, in addition to the American territorial transit-rates above mentioned, the sum of 10 francs per kilogramme on letters, and the sum of 50 centimes per kilogramme on samples and printed matter, which may be contained in these mails.

Reciprocally, when the closed mails coming from or addressed to the United States shall be transported between the American frontier and the French frontier by the French mail-packets, the United States postal administration shall pay to the postal administration of France, in addition to the French territorial transit-rates above mentioned, the sum of $2 per kilogramme on letters, and 10 cents per kilogramme on samples and printed matter, which may be contained in these mails.

The maritime postage for which the two postal administrations of France and of the United States will have to reciprocally account for upon the correspondence of all kinds transported in closed mails, by packets other than those navigating between France and the United States, will be the same as those applicable to correspondence of the same nature coming from or addressed to the countries which assure the maritime transportation of the said closed mails.

It is understood that the weight of the correspondence of all kinds which is found undeliverable, as also that of the letter-bills and other documents of account arising from the exchange of the correspondence transported in closed mails by either of the two administrations for the account of the other, shall not be included in the weight of the letters, samples, or printed matter, upon which should be levied the territorial and maritime transit-rates required in virtue of the present article.

ARTICLE XI.

There shall be prepared every three months, by the postal administration of France, particular accounts, recapitulating the proceedings of the transmission of the correspondence between the respective exchange-offices.

These accounts, which shall have for basis and vouchers the acknowledgments of receipt for the mails during the quarterly period, shall be summed up in a general account, designed to present the definitive results of the transmission of the correspondence exchanged between the two administrations.

After having been reciprocally examined and approved, the general account above mentioned shall be paid, by the administration recognized as debtor towards the other, in the course of the second quarter following that to which the account refers.

The balances of the accounts shall be paid as follows, viz:

1st. In drafts upon Washington, and in American money, when the balance is in favor of the United States office.

2d. In drafts upon Paris, and in French money, when the balance is in favor of the French office.

In the establishment of the accounts, and in all matters relative to the execution of the convention, the dollar shall be considered the equivalent of 5 francs 20 centimes.

ARTICLE XII.

Ordinary or registered letters, samples of merchandise, photographs, and printed matter, wrongly addressed or wrongly sent, shall be, without delay, reciprocally returned through the intermediary of the respective exchange-offices for the weight and rate at which the sending office shall have delivered these objects in account to the other office.

Articles of the same nature, which may have been sent to addressees who have left for the country of origin of these letters, shall be respectively returned, charged with the postage which would have been paid by the addressees.

Ordinary letters and articles under band, which shall have originally been delivered to the postal administration of France, or to the postal administration of the United States, by other administrations, and which, in consequence of change of residence of the addressees, must be returned from one of the two countries to the other, shall be reciprocally delivered, charged with the postage required at the place of first destination.

ARTICLE XIII.

Ordinary or registered letters, samples of merchandise, photographs, and printed matter, exchanged in open mails between the two postal administrations of France and of the United States, and which shall be found undeliverable, for any cause whatsoever, must be reciprocally returned at the end of each month, and oftener if possible.

Such articles as shall have entered into the accounts shall be returned for the rate at which they shall have been originally entered on the account by the dispatching office.

Such as shall have been delivered prepaid to destination or to the frontier of the corresponding office shall be returned without charge or discount.

ARTICLE XIV.

The postal administration of France and the postal administration of the United States shall designate by common accord the offices through which the exchange of the respective correspondence should take place;

they shall regulate the routes of the correspondence reciprocally transmitted, and the form of the accounts mentioned in the preceding article XI, and also every other measure of detail or order necessary to assure the execution of the stipulations of the present convention.

It is understood that the measures designated above may be modified by the two administrations whenever, by common accord, they shall perceive such necessity.

ARTICLE XV.

The present convention shall have force and effect from the day agreed upon by the two parties, and shall remain obligatory from year to year, until one of the two parties shall have made known to the other, a year in advance, its intention to terminate the same.

During this last year the convention shall continue to have full and entire force, without prejudice to the liquidation and the balance of the accounts between the respective administrations after the expiration of said term.

ARTICLE XVI.

The present convention shall be ratified and the ratifications exchanged as soon as possible.

In faith of which the respective plenipotentiaries have signed the present convention and have affixed their seals thereto.

Done in duplicate and signed at Washington the twenty-eighth day of April, in the year of our Lord one thousand eight hundred and seventy-four.

[SEAL.] JNO. A. J. CRESWELL,
Postmaster-General of the United States.

[SEAL.] A. BARTHOLDI.

I hereby approve the aforegoing convention, and in testimony thereof I have caused the seal of the United States to be affixed.

[SEAL.] U. S. GRANT.

By the President:

HAMILTON FISH,
Secretary of State.

WASHINGTON, *April* 28, 1874.

[Translation.]

Having seen and examined the above convention, we have approved it, and do approve, by virtue of the provisions of the law voted by the National Assembly, in the session of 25th June, 1874. In faith of which we have caused to be placed hereupon the seal of the republic.

Given at Versailles, June 26, 1874.

[SEAL.] MARÉCHAL MAC MAHON, DUC DE MAGENTA.

By the President of the French Republic:

The Minister of Foreign Affairs,

DECAZES.

We, J. W. Marshall, Postmaster-General of the United States, and Amédée Bartholdi, officer of the Legion of Honor, envoy extraordinary and minister plenipotentiary of France, certify that on this date we have proceeded to perform the exchange of ratifications of the postal convention which was concluded between the United States and the French Republic at Washington the 28th day of April, one thousand eight hundred and seventy-four.

Done in duplicate and signed at Washington this seventeenth day of July, one thousand eight hundred and seventy-four.

[SEAL.] J. W. MARSHALL,
Postmaster-General.

[SEAL.] A. BARTHOLDI.

Regulations of detail and order, concluded between the postal administration of the United States and the postal administration of France, for the execution of the postal convention of 28th April, 1874.

In view of the postal convention concluded the 28th of April, 1874, between the United States and France, stipulating (Article XIV) that the postal administrations of the two countries shall designate, by common accord, the offices through which the exchange of the respective correspondence shall take place, and shall regulate the direction of the correspondence reciprocally transmitted, the form of accounts, as well as every other measure of detail or order necessary to assure the execution of the said convention, the Postmaster-General of the United States of the one part, and the Director General of Posts of France of the other part, have agreed as follows:

ARTICLE 1.

The exchange of correspondence between the postal administration of France and the postal administration of the United States shall be effected as follows:

On the side of the postal administration of France—
1st. By the office of Paris.
2d. By the office of Hâvre.
3d. By the office of Cherbourg.
4th. By the office of Brest.
5th. By the traveling office of Paris to Calais.
6th. By the traveling office of Lille to Calais.

On the side of the postal administration of the United States—
1st. By the office of Boston.
2d. By the office of New York.

ARTICLE 2.

The relations between the French exchange-offices and the American exchange-offices shall be established in the following manner, viz:

By the way of the French mail-packets.—The offices of Paris, Hâvre, and Brest shall correspond with the office of New York.

By the way of the packets of the Hamburg line.—The offices of Paris and Hâvre shall make up mails for the office of New York, and the office of New York shall make up mails for the offices of Paris, Hâvre, and Cherbourg.

By the way of England.—The offices of Paris and Hâvre and the traveling offices of Paris to Calais and Lille to Calais shall correspond with the offices of Boston and New York.

ARTICLE 3.

In conformity with Article I of the convention of 28th April, 1874, the postal administration of the United States shall pay, on account of the postal administration of France, the expenses of the intermediary transportation of the mails which shall be sent from France to the United States, as well by means of the Hamburg packets navigating between France and the United States as by the way of England and the packets used for the conveyance of the correspondence of the British Kingdom to the United States.

These expenses shall be re-imbursed by the postal administration of France to the postal administration of the United States, as follows:

1st. At the rate of 30 centimes per thirty grammes of letters, and 50 centimes per kilogramme of samples of merchandise or printed matter, for such of the said mails as shall be forwarded by means of the Hamburg packets.

2d. At the rate of 44 centimes per thirty grammes of letters, and 1 franc per kilogramme of samples of merchandise or printed matter, for such of the said mails as shall be forwarded by the way of England and the packets used for the conveyance of the correspondence between England and the United States.

On its side, the postal administration of France shall assure, on account of the postal administration of the United States, the intermediary transportation of the mails which shall be forwarded from the United States to France by means of the French mail-packets.

The postal administration of the United States shall pay for this transportation to the postal administration of France the same rates, per thirty grammes of letters and per kilogramme of samples of merchandise or printed matter, as those at which the intermediary transportation is hereinabove fixed, by Hamburg packets, of the mails from France for the United States.

ARTICLE 4.

The correspondence exchanged between the postal administration of France and the postal administration of the United States shall be forwarded in conformity with table A, annexed to the present regulations.

ARTICLE 5.

Correspondence sent in transit, in open mail, conformably to Article VII of the convention of 28th April, 1874, shall be exchanged between the postal administration of France and the postal administration of the United States on the conditions respectively fixed by the said article and by tables B and C, annexed to the present regulations.

The postage charges which the two administrations shall have mutually to carry to account for this correspondence shall be stated by the dispatching exchange-offices in ordinary figures, and uniformly on the upper left side of the address, as follows:

In red ink, on prepaid objects entered by the dispatching office to the credit of the corresponding office.

In black ink, on unpaid objects entered by the dispatching office to the debit of the corresponding office.

ARTICLE 6.

Registered letters, which shall be reciprocally forwarded by the postal administrations of France and the United States, shall be marked, on the side of the address, with a stamp, bearing in red ink the word "*Chargé*," or the word "*Registered*," as the case may be.

ARTICLE 7.

Ordinary letters, registered letters, samples of merchandise, and printed matter, sent either from the offices depending upon the postal administration of France for the United States and the countries to which the United States serves as intermediary, or from the offices depending upon the postal administration of the United States for France, Algeria, and the countries to which France serves as intermediary, shall be marked on the side of the address with a stamp, indicating the date of mailing and the place of origin.

ARTICLE 8.

The postal administration of the United States shall cause to be placed on the address of the prepaid objects which the American exchange-offices shall forward to the French exchange-offices the impression, in red ink, of the stamp "*Paid*."

On its side, the postal administration of France shall cause to be placed the impression, in red ink, of the stamp "*P. D.*" upon the objects prepaid to destination; and of the stamp "*PP.*" upon the objects prepaid by compulsion to any limit whatever of their course, which shall be forwarded by the French exchange-offices to the American exchange-offices.

The stamp "*Affranchissement insuffisant*," or "*Insufficiently prepaid*," as the case may be, shall be placed upon letters insufficiently paid.

ARTICLE 9.

Each of the mails exchanged between the postal administrations of the two countries shall be accompanied by a letter-bill, upon which the exchange-offices shall state, with the classifications established by the convention of 28th April, 1874, as follows:

1st. The nature and the number of the objects which the mail shall contain.

2d. The number of single rates relating to the correspondence of the one of the two countries for the other.

3d. The weights or sums to be carried to account for each class of correspondence.

The office to which the mail shall be addressed shall acknowledge the receipt thereof to the dispatching office by the first mail thereafter.

The letter-bills and acknowledgments of receipt of the French exchange-offices shall conform to models D and E, annexed to the present regulations.

The forms of letter-bill and acknowledgment of receipt, of which the American exchange-offices shall make use in their relations with the French exchange-offices, must accord with the models hereinabove designated.

ARTICLE 10.

The correspondence described in the letter-bills shall be divided into as many packets as this correspondence will admit of lines or special articles.

Each packet shall be placed under a label, indicating the nature and the weight of the correspondence, as well as the number of objects and the number of single-rates or the sums, as the case may be, inscribed upon the letter-bill.

ARTICLE 11.

Registered letters shall be entered by names on the letter-bill of the dispatching office, with all the details which this bill allows.

These letters shall form a special packet, covered with an envelope of white paper, sealed on all the folds by means of the seal of the dispatching office, and surrounded by a string placed crosswise. The ends of this string shall be attached to the bottom of the letter-bill by means of a gum seal.

The letter-bill must bear the stamp "*Chargé*," or "*Registered*," whenever the mail shall contain one or more registered letters.

ARTICLE 12.

Every mail, after having been tied up interiorly, must be enveloped in gray paper, in sufficient quantity to resist the friction, then tied exteriorly and sealed with wax, with the impression of the office seal.

The string which shall surround a mail exteriorly must always be without knot.

ARTICLE 13.

In case that, on the day fixed for the dispatch of the mails, an exchange-office should have no object to address to the corresponding office, this exchange-office must nevertheless send, in the ordinary form, a mail, which shall contain only a negative letter-bill.

ARTICLE 14.

The postage or charge upon letters that have become dead, from whatever cause, which the two administrations shall return to each other, by virtue of Article XIII of the convention of 28th April, 1874, shall only be admitted in release of the administration to which these letters shall have been originally transmitted, so far as the condition of their seals shall not give reason to suppose that they have been opened.

However, scurrilous letters, and those commonly called decoy letters, may be comprised and admitted in the dead matter reciprocally returned, even though these letters may have been opened.

ARTICLE 15.

Letters not claimed, addressed *poste-restante* or in furnished hotels, may, after three months' stay, be returned on both sides, under the conditions fixed by Article XIII, before cited, and the preceding article.

The account of the total of dead matter shall be prepared in bordereaux, conforming to the model F, annexed to the present regulations.

ARTICLE 16.

It is agreed that the provisions of the convention of 28th April, 1874, and of the present regulations, shall be put into execution the 1st of August, 1874.

Done in duplicate and signed at Washington the 9th of June, 1874, and at Paris the 26th of June, 1874.

[SEAL.] JNO. A. J. CRESWELL,
Postmaster General.

[SEAL.] LE LIBON,
Director-General of Posts.

A.

Table indicating the direction to be received by the correspondence exchanged between the postal administration of France and the postal administration of the United States.

Mails from the French offices.			Mails from the American offices.		
Offices.		Destination of the objects comprised in the mails from the offices designated in the first column for the offices designated in the second column.	Offices.		Destination of the objects comprised in the mails from the offices designated in the first column for the offices designated in the second column.
Dispatching.	Receiving.		Dispatching.	Receiving.	
1	2	3	1	2	3
		§ 1.—By way of the French mail-packets.			
Paris Hâvre Brest	New York	The United States and the countries to which the United States serves as intermediary.	New York	Hâvre Brest Paris	Hâvre. The following departments: Ariége, Aude, Aveyron, Calvados, Charente, Charente-Inférieure, Cantal, Corrèze, Côtes-du-Nord, Creuse, Dordogne, Eure-et-Loire, Finistère, Gard, Haute-Garonne, Gers, Gironde, Hérault, Ille-et-Vilaine, Indre-et-Loire, Landes, Loire-et-Cher, Loire-Inférieure, Loiret, Lot, Lot-et-Garonne, Maine-et-Loire, Manche, Mayenne, Morbihan, Orne, Basses-Pyrénées, Hautes-Pyrénées, Pyrénées-Orientales, Sarthe, Seine-et-Oise, Deux-Sèvres, Tarn, Tarn-et-Garonne, Vendée, Vienne, and Haute-Vienne. The rest of France, Algeria, and the countries to which France serves as intermediary.
		§ 2.—By way of the Hamburg packets.			
Paris Hâvre	New York	The United States and the countries to which the United States serves as intermediary.	New York	Cherbourg Hâvre. Paris	The departments of Manche, Calvados, Eure, and Seine-Inférieure, (except Havre.) Hâvre. The rest of France, Algeria, and the countries to which France serves as intermediary.

§ 3.—By the way of England.

By the packets for New York.

Hâvre Paris Travelling-office of Lille to Calais. Travelling-office of Paris to Calais.	Boston..... New York.	The States of Massachusetts, Maine, Vermont, New Hampshire, and Rhode Island. The rest of the United States and the countries to which the United States serves as intermediary.	New York Boston....	Hâvre Paris Travelling-office of Calais to Lille. Travelling-office of Calais to Paris.	Hâvre. Paris. The department of the Nord, Belgium, the Netherlands, and the northern states of Europe. The rest of France and the other foreign countries to which France serves as intermediary.

By the packets for Boston.

Hâvre Paris Travelling-office of Lille to Calais. Travelling-office of Paris to Calais.	Boston.....	The States of Massachusetts, Maine, Vermont, New Hampshire, and Rhode Island.

B.

Table indicating the rates to be paid by the postal administration of the United States to countries to which France

Designation of the countries.	Nature of the correspondence.	Correspondence th… Conditions of payment.
1	2	3
England, Belgium, Switzerland, Luxemburg	Ordinary letters ..	Optional
	Registered letters.	Compulsory..
	Samples & prints.	....do .....
Germany, Italy, the Netherlands, Portugal, Malta	Ordinary letters ..	Optional .....
	Registered letters.	Compulsory...
	Samples & prints.	do .....
Denmark, Russia	Ordinary letters ..	Optional .....
	Registered letters.	Compulsory...
	Samples & prints.	....do .....
Austria, Greece, Sweden	Ordinary letters ..	Optional .....
	Registered letters.	Compulsory...
	Samples & prints.	....do .....
Norway	Ordinary letters ..	Optional .....
	Registered letters.	Compulsory..
	Samples & prints.	....do .....
Roumania, Servia, Montenegro, Tangiers, Tunis, and cities of the Levant in which France maintains post-offices.*	Ordinary letters ..	Optional .....
	Registered letters.	Compulsory..
	Samples & prints.	....do .....
Brazil, French, English, and Netherland colonies and possessions in Africa and America	Ordinary letters ..	Optional .....
	Registered letters.	Compulsory..
	Samples & prints.	....do .....
French, English, and Netherland colonies and possessions in Asia and Oceanica, (except Southern Australia and Tasmania, Shanghai, China, and Yokohama, Japan.) via Marseilles and Suez..	Ordinary letters ..	Optional .....
	Registered letters.	Compulsory...
	Samples & prints.	....do .....
via Brindisi	Ordinary letters ..	Optional .....
	Registered letters.	Compulsory..
	Samples & prints.	....do .....
Spain and Gibraltar	Ordinary letters ..	....do .....
	Samples & prints.	....do .....
Southern Australia and Tasmania.. via Marseilles and Suez..	Ordinary letters ..	....do .....
	Samples & prints.	....do .....
via Brindisi	Ordinary letters ..	....do .....
	Samples & prints.	....do .....
Countries beyond the sea other than those above designated. French or English packets	Ordinary letters ..	....do .....
	Samples & prints.	....do .....
via Brindisi	Ordinary letters ..	....do .....
	Samples & prints.	....do .....

*Alexandria, Alexandretta, Beirût, Cairo, Constantinople, Dardanelles, Ineboli, Jaffa, Kerrasund, Sulina, Trebizond, Tripoli in Syria, Tultcha, Varna.

B.

the postal administration of France for the correspondence originating in or destined for the serves as intermediary.

addressed to the countries designated in first column of the table.		Correspondence originating in the countries designated in the first column of the table.		
Limit of payment.	Rate to be paid by the American office to the French office for each prepaid object.	Conditions of payment.	Limit of payment.	Rate to be paid by the American office to the French office for each unpaid object.
4	5	6	7	8
Destination	6 cts. pr. 10 grms.	Optional	Destination	10 cts. pr. 10 grms.
do	12 cts. pr. 10 grms.	Compulsory	do	10 cts. pr. 10 grms.
do	2 cts. pr. 40 grms.	do	do	10 cts. pr. 10 grms.
do	8 cts. pr. 10 grms.	Optional	do	12 cts. pr. 10 grms.
do	16 cts. pr. 10 grms.	Compulsory	do	12 cts. pr. 10 grms.
do	2 cts. pr. 40 grms.	do	do	12 cts. pr. 10 grms.
do	10 cts. pr. 10 grms.	Optional	do	14 cts. pr. 10 grms.
do	20 cts. pr. 10 grms.	Compulsory	do	14 cts. pr. 10 grms.
do	3 cts. pr. 40 grms.	do	do	14 cts. pr. 10 grms.
do	12 cts. pr. 10 grms.	Optional	do	16 cts. pr. 10 grms.
do	24 cts. pr. 10 grms.	Compulsory	do	16 cts. pr. 10 grms.
do	3 cts. pr. 40 grms.	do	do	16 cts. pr. 10 grms.
do	14 cts. pr. 10 grms.	Optional	do	18 cts. pr. 10 grms.
do	28 cts. pr. 10 grms.	Compulsory	do	18 cts. pr. 10 grms.
do	3 cts. pr. 40 grms.	do	do	18 cts. pr. 10 grms.
do	16 cts. pr. 10 grms.	Optional	do	20 cts. pr. 10 grms.
do	32 cts. pr. 10 grms.	Compulsory	do	20 cts. pr. 10 grms.
do	3 cts. pr. 40 grms.	do	do	20 cts. pr. 10 grms.
do	20 cts. pr. 10 grms.	Optional	do	24 cts. pr. 10 grms.
do	40 cts. pr. 10 grms.	Compulsory	do	24 cts. pr. 10 grms.
Port of debarkation	3 cts. pr. 40 grms.	do	Port of embarkation	4 cts. pr. 40 grms.
Destination	20 cts. pr. 10 grms.	Optional	Destination	24 cts. pr. 10 grms.
do	40 cts. pr. 10 grms.	Compulsory	do	24 cts. pr. 10 grms.
Port of debarkation	3 cts. pr. 40 grms.	do	Port of embarkation	4 cts. pr. 40 grms.
Destination	26 cts. pr. 10 grms.	Optional	Destination	30 cts. pr. 10 grms.
do	52 cts. pr. 10 grms.	Compulsory	do	30 cts. pr. 10 grms.
Port of debarkation	5 cts. pr. 40 grms.	do	Port of embarkation	6 cts. pr. 40 grms.
Frontier of departure from France.	8 cts. pr. 10 grms.	do	Frontier of entry in France.	12 cts. pr. 10 grms.
do	2 cts. pr. 40 grms.	do	do	2 cts. pr. 40 grms.
Ports of the Great Southern Ocean.	20 cts. pr. 10 grms. 3 cts. pr. 40 grms.	do do	Point of junction of English and French services.	24 cts. pr. 10 grms. 4 cts. pr. 40 grms.
	26 cts. pr. 10 grms. 5 cts. pr. 40 grms.	do do	do	30 cts. pr. 10 grms. 6 cts. pr. 40 grms.
Port of debarkation	20 cts. pr. 10 grms.	do	Port of embarkation	24 cts. pr. 10 grms.
do	3 cts. pr. 40 grms.	do	do	4 cts. pr. 40 grms.
do	26 cts. pr. 10 grms.	do	do	30 cts. pr. 10 grms.
do	5 cts. pr. 40 grms.	do	do	6 cts. pr. 40 grms.

Kustendje, Lattaquia, Messina, Port Said, Rhodes, Salonica, Rodosto, Samsoun, Ordon, Smyrna, Suez,

C.

Table indicating the rates to be paid by the postal administration of France to the postal administration of the United States for the correspondence originating in or destined for the countries to which the United States serves as intermediary.

Designation of the countries.	Nature of the correspondence.	Correspondence addressed to the countries designated in the first column of the table.			Correspondence originating in the countries designated in the first column of the table.		
		Conditions of payment.	Limit of payment.	Rate to be paid by the French office to the American office for each prepaid object.	Conditions of payment.	Limit of payment.	Rate to be paid by the French office to the American office for each unpaid object.
1	2	3	4	5	6	7	8
				f. c.			*f. c.*
Argentine Republic, Belize, United States of Colombia, (except Aspinwall and Panama,) Paraguay, Uruguay, West Indies,* (except where otherwise stated.)	Letters	Prepayment obligatory.	Port of debarkation.	1.00 per ½ oz	The United States postage cannot be prepaid in the country of origin.		.50 per ½ oz.
	Newspapers	do	do	.20 each	do		.10 each.
	Other prints and samples	do	do	.50 per 4 ozs	do		.10 per 2 ozs.
Aspinwall,* Australia (except New South Wales,) Bermuda, China,* (except Hong-Kong and dependent Chinese ports,) Costa Rica, Cuba, Fiji Islands, Guatemala, Jamaica, Japan,* Mexico, Nicaragua, Panama,* San Salvador, San Domingo, Saint Thomas, San Juan, Saint Croix, Venezuela.	Letters	do	do	.50 per ½ oz	do		.50 per ½ oz.
	Newspapers	do	do	.10 each	do		.10 each.
	Other prints and samples	do	do	.10 per 2 ozs	do		.10 per 2 ozs.
Bahamas	Letters	do	do	.15 per ½ oz	do		.15 per ½ oz.
	Newspapers	do	do	.10 each	do		.10 each.
	Other prints and samples	do	do	.10 per 2 ozs	do		.10 per 2 ozs.
Bolivia,* Chili,* Peru*	Letters	do	do	1.20 per ½ oz	do		.50 per ½ oz.
	Newspapers	do	do	.20 each	do		.10 each.
	Other prints and samples	do	do	.50 per 4 ozs	do		.10 per 2 ozs.
Brazil*	Letters	do	Destination	.75 per ½ oz	Obligatory	Port of embarkation in United States.	(†)
	Newspapers	do	Port of debarkation	.10 each	do		.10 each.
	Other prints and samples	do	do	.10 per 4 ozs	do		.10 per 4 ozs.

Canada* and Prince Edward Island.*	Letters	do	Destination	.30 per ½ oz	Obligatory	Destination	(†)
	Newspapers	do	Port of debarkation	.05 per 2 ozs	do	Port of embarkation in United States.	.05 per 2 ozs.
	Other prints and samples	do	do	.10 per 2 ozs	do	do	.10 per 2 ozs.
East Indies, British	Letters	do	Destination	.50 per ½ oz	do	do	(†)
	Newspapers	do	do	.10 each	do	do	(†)
	Other prints and samples	do	do	.40 per 4 ozs	do	do	(†)
Ecuador	Letters	do	do	1.10 per ½ oz	do	do	(†)
	Newspapers	do	do	.10 each	do	do	.10 each.
	Other prints and samples	do	do	.20 per 4 ozs	do	do	.20 per 4 ozs.
Hawaiiwan Kingdom, (Sandwich Islands.)	Letters	do	do	.30 per ½ oz	do	do	(*)
	Newspapers	do	Port of debarkation	.05 per 2 ozs	do	do	.05 per 2 ozs.
	Other prints and samples	do	do	.20 per 4 ozs	do	do	.20 per 4 ozs.
Hong-Kong and dependent Chinese ports.	Letters	do	Destination	.50 per ½ oz	do	do	(†)
	Newspapers	do	do	.10 each	do	do	(†)
	Other prints and samples	do	do	.50 per 4 ozs	do	do	(†)
New South Wales* and New Zealand.*	Letters	do	do	.60 per ½ oz	do	do	(†)
	Newspapers	do	Port of debarkation	.10 each	do	do	(†)
	Other prints and samples	do	do	.20 per 4 ozs	do	do	(†)

* The extranational and United States postage on this correspondence being required to be fully prepaid in the country of origin, no charge is made against the French office.

† Registered letters are subject to a registration fee of 40 centimes per letter, in addition to the postage, (except to New South Wales and New Zealand, to which the fee is 60 centimes, and to Canada, to which the fee is 25 centimes.) Registered letters can be sent to Yokohama, only, in Japan, and to Shanghai, in China.

D.

POST-OFFICE DEPARTMENT OF THE UNITED STATES OF AMERICA.

LETTER-BILL.

CORRESPONDENCE WITH FRANCE.

Mails sent from the office of (1) ——, for the office of (2) ——, the (3) ——, 187—, by the way of (4) ——, leaving (5) —— for (6) —— the (7) ——, 187—.

(1) Name of the dispatching office. (2) Name of the receiving office. (3) Date of the dispatch of the mail. (4) Indication of the route—via England, via French packets, via Hamburg packets, as the case may be. (5) Name of the port of embarkation. (6) Name of the port of debarkation. (7) Date of departure of packet.

TABLE No. 1.—ORDINARY CORRESPONDENCE.

Nos. of the articles of account.		Designation of the correspondence.	Progression of weight according to which must be established the number of single rates or the sums to be entered in columns 7 and 9.	Sum to be carried to account per each single rate.	Statement of the American exchange-office.		Verification of the French exchange-office.	
Credit of France.	Credit of the U. S.				Number of objects.	Number of single rates or sums.	Number of objects.	Number of single rates or sums.
1	2	3	4	5	6	7	8	9
		§ I.—CORRESPONDENCE FORWARDED FOR MEMORANDUM.				*Single rates.*		*Single rates.*
		Correspondence originating in the United States, addressed to France and Algeria. { Prepaid letters	15 grs.					
		Insufficiently-paid letters	15 grs.					
		Samples and prints of every nature.						
		Unpaid letters	15 grs.					
		§ II.—CORRESPONDENCE FORWARDED ON ACCOUNT.				*Sums. Cents.*		*Sums. Cents.*
1		Prepaid letters from the United States for the countries to which France serves as intermediary	10 grs.	(I)				
2		Prepaid letters from the countries to which the United States serves as intermediary, for { France and Algeria	15 grs.	4 cents.				
3		The countries to which France serves as intermediary	10 grs.	(I)				
4		Samples and prints for the countries to which France serves as intermediary, originating in { The United States		(I)				
5		The countries to which the United States serves as intermediary		(I)				
6		Samples and prints from the countries to which the United States serves as intermediary, for France and Algeria		1 cent.				

	15	Unpaid letters — From the United States for the countries to which France serves as intermediary	15 grs.	f. c. 0 20		f. c.		f. c.
	16	Unpaid letters — From the countries to which the U. S. serves as intermediary, for .. France and Algeria	15 grs.	(II)				
	17	Unpaid letters — From the countries to which the U. S. serves as intermediary, for .. The countries to which France serves as intermediary	10 grs.	(II)				
7		Samples and prints from the United States and from the countries to which the United States serves as intermediary, for Spain, Gibraltar, the colonies, and countries beyond the sea		(I)		Cents.		Cents.
	18	Correspondence re-forwarded, (postage to be recovered)				f. c.		f. c.
8		Correspondence wrongly sent — Prepaid—transit postage due the French office				Cents.		Cents.
	19	Correspondence wrongly sent — Unpaid—transit postage due the American office				f. c.		f. c.

(I) See Table B, annexed to the convention.

(II) See Table C annexed to the convention.

TABLE No. 2.—REGISTERED LETTERS ADDRESSED TO FRANCE, ALGERIA, AND FOREIGN COUNTRIES.

Number of the articles of account.	Stamp of origin.	Designation of the addresses.	Weight of each letter.	Postage to be paid to the French office on registered matter in transit.	
Credit of France.			Grammes.	Statement of the American exchange-office.	Verification of the French exchange-office.
1	2	3	4	5	6
				Cents.	*Cents.*
9					
			Number of letters.		
		Totals			

TABLE No. 3.—STATEMENT OF THE QUANTITIES WHICH ARE TO SERVE AS THE BASIS OF THE ACCOUNT FOR THE RATES OF INTERMEDIARY POSTAGE BETWEEN THE POSTAL ADMINISTRATIONS OF FRANCE AND THE UNITED STATES.

Nos. of the articles of account.		Designation of the correspondence.	Statement of the American exchange-office.	Verification of the French exchange-office.
Credit of France.	Credit of the U. S.		Net weight in grammes.	Net weight in grammes.
1	2	3	4	5
	20	England. ..... Letters described in articles 15, 16, 17, 18, and 19 of the credit of the U. S. and 8 of the credit of France		
10		By French packets... Letters described in tables Nos. 1 and 2, (except those entered in articles 15, 16, 17, 18, and 19 of the U. S. and 8 of the credit of France)		
11		Samples and prints described in table No. 1		
	21	By Hamburg packets. Letters described in articles 15, 16, 17, 18, and 19 of the credit of the U. S. and 8 of the credit of France		

TABLE No. 4.—CLOSED MAILS.

Nos. of the articles of account.				Title under which the objects comprised in the closed mails must figure in the accounts.	Name of the dispatching office.	Name of the receiving office.	Statement of the American exchange-office.			Verification of the French exchange-office.		
Credit of France.		Credit of the U. S.					No. of closed mails.	Net weight, in grammes, of the objects comprised in the closed mails.		No. of closed mails.	Net weight, in grammes, of the objects comprised in the closed mails.	
Letters.	Samples and prints.	Letters.	Samples and prints.					Letters.	Samples and prints of all kinds.		Letters.	Samples and prints of all kinds.
1	2	3	4	5	6	7	8	9	10	11	12	13
		22	23	From Tahiti for France.....								
						Total number of closed mails						

Certified by the undersigned, postmaster of ————.

E.

POST-OFFICE DEPARTMENT OF THE UNITED STATES OF AMERICA.

ACKNOWLEDGMENT OF RECEIPT.

CORRESPONDENCE WITH FRANCE.

From the office of _____ *for the office of* _____.

I have received (1) ——, 187 , your mail of the (2) ——, 187 , forwarded from (3) ——— to (4) ———, by the way of (5) ———.

(1) Date of arrival of the mail at the office of destination. (2) Date of departure of the mail from the office of origin. (3) Name of the port of embarkation. (4) Name of the port of debarkation. (5) Route employed—via England, via French packets, via Hamburg packets, as the case may be.

TABLE No. 1.—ORDINARY CORRESPONDENCE.

Nos. of the articles of account.		Designation of the correspondence.	Progression of weight according to which must be established the sums or single rates to be carried to columns Nos. 7 and 9.	Sum to be carried to account per each single rate.	Statement of the French exchange-office.		Verification of the American exchange-office.	
Credit of France.	Credit of the U. S.				Number of objects.	Number of single rates or sums.	Number of objects.	Number of single rates or sums.
1	2	3	4	5	6	7	8	9
		§ I.—CORRESPONDENCE FORWARDED FOR MEMORANDUM.				*Single rates.*		*Single rates.*
		Correspondence originating in France and Algeria addressed to the United States. — Prepaid letters	10 grs.					
		Insufficiently-paid letters	10 grs.					
		Prepaid samples and prints of every nature	40 grs.					
		Unpaid letters	10 grs.					
		§ II.—CORRESPONDENCE FORWARDED ON ACCOUNT.				*Sums.* *f.* *c.*		*Sums.* *f.* *c.*
	1	Prepaid letters from France for the countries to which the United States serves as intermediary	10 grs.	(I)				
	2	Prepaid letters from the countries to which France serves as intermediary. — For the United States	10 grs.	*f.* *c.* 0 20				
	3	For the countries to which the United States serves as intermediary	10 grs.	(I)				
	4	Samples and prints from France for the countries to which the United States serves as intermediary	40 grs.	(I)				
	5	Prepaid samples and prints from the countries to which France serves as intermediary. — For the United States	40 grs.	*f.* *c.* 0 05				
	6	For the countries to which the United States serves as intermediary	40 grs.	(I)				

12		Unpaid letters. From France for the countries to which the United States serves as an intermediary	10 grs.	4 cents.		*Cents.*		*Cents.*
13		Unpaid letters. From foreign countries to which France serves as intermediary for: The United States	10 grs.	(II)				
14		Unpaid letters. From foreign countries to which France serves as intermediary for: The countries to which the United States serves as intermediary	10 grs.	(II)				
15		Samples and prints from colonies and countries beyond the sea, from Spain and Gibraltar, for the United States and the countries to which the United States serves as intermediary	40 grs.	(II)				
16		Correspondence to be re-forwarded, (postage to be recovered)				*f.* *c.*		*f.* *c.*
7		Correspondence wrongly sent. Prepaid—transit postage due the American office				*Cents.*		*Cents.*
17		Correspondence wrongly sent. Unpaid—transit postage due the French office						

(I) See Table C, annexed to the convention. (II) See Table B, annexed to the convention.

TABLE No. 2.—REGISTERED LETTERS ORIGINATING IN FRANCE, ALGERIA, AND FOREIGN COUNTRIES.

Number of the articles of account.	Stamp of origin.	Designation of the addressees.	Weight of each letter.	Postage to be paid to the American office on registered matter in transit.	
				Statement of the French exchange-office.	Verification of the American exchange-office.
Credit of the U. S.			Grammes.		
1	2	3	4	5	6
				f. *c.*	*f.* *c.*
8					
			Number of letters.		
		Totals			

TABLE No. 3.—STATEMENT OF THE QUANTITIES WHICH ARE TO SERVE AS THE BASIS OF THE ACCOUNT FOR THE RATES OF INTERMEDIARY POSTAGE BETWEEN THE POSTAL ADMINISTRATIONS OF FRANCE AND THE UNITED STATES.

Nos. of the articles of account.		Designation of the correspondence.		Statement of the French exchange-office.	Verification of the American exchange-office.
Credit of France.	Credit of the U. S.			Net weight in grammes.	Net weight in grammes.
1	2	3		4	5
	9	Via England.....	Letters described in tables Nos. 1 and 2, (except those entered in the credit of France, and in article 7 of credit of U. S)		
	10		Samples and prints described in table No. 1, (except those entered to the credit of France)		
18		By French packets...	Letters entered in articles 12, 13, 14, 16, and 17 of the credit of France, and in article 7 of credit of U. S		
19			Samples and prints entered in article 15 of the credit of France		
	11	By Hamburg packets.	Letters described in tables Nos. 1 and 2, (except those entered to the credit of France, and in article 7 of U. S)		
	12		Samples and prints described in table No. 1, (except those entered to the credit of France)		

TABLE No. 4.—CLOSED MAILS.

Nos. of the articles of account.				Title under which the objects comprised in the closed mails must figure in the accounts.	Name of the dispatching office.	Name of the receiving office.	Statement of the French exchange-office.			Verification of the American exchange-office.		
Credit of France.		Credit of the U. S.					No. of closed mails.	Net weight, in grammes, of the objects comprised in the closed mails.		No. of closed mails.	Net weight, in grammes, of the objects comprised in the closed mails.	
Letters.	Samples and prints.	Letters.	Samples and prints.					Letters.	Samples and prints of all kinds.		Letters.	Samples and prints of all kinds.
1	2	3	4	5	6	7	8	9	10	11	12	13
		13	14	From France for Tahiti.....								
				Total number of closed mails								

Certified by the undersigned, postmaster of ————.

POST-OFFICE DEPARTMENT OF THE UNITED STATES. F. Month of

Bordereau of dead matter returned by the office of ——— to the office of ———.

Nos. of the articles of the account in which the correspondence originally figured.	Designation of the correspondence.			No. of objects.	Sums at which the correspondence was accounted for by the office of ——— to the office of ———.	Observations.
	Origin.	Destination.	Nature.			
1	2	3	4	5	6	7
Total of sums due to the office of.....						

ADDITIONAL ARTICLE BETWEEN THE GENERAL POST-OFFICE OF THE UNITED STATES OF AMERICA AND THE GENERAL POST-OFFICE OF THE NETHERLANDS.

Whereas a regular line of direct steamers is soon to be established between the port of New York and the port of Rotterdam, which can be employed for the transportation of the Netherland-American mails at a compensation for sea-conveyance between the two frontiers not to exceed 5 cents (Dutch) or 2 cents (United States) for each single letter: Now, therefore, the undersigned, duly authorized by their respective governments, have agreed upon the following additional article to the postal convention of 26 September, 1867, and to the additional convention of 10–29 January, 1870.

SOLE ARTICLE.

The single-letter rate on correspondence exchanged directly between the two administrations by means of such steamship-line shall be as follows, viz:

1°. On letters from the United States, 6 cents, (United States.)

2°. On letters from the Netherlands, 15 cents, (Dutch.)

This additional article takes effect on the date of the dispatch of the first mail by such steamship-line, and from that date forward has the same duration as the convention of 26 September, 1867, and the additional convention of 10–29 January, 1870.

Done in duplicate and signed in Washington the fourteenth day of September, one thousand eight hundred and seventy-four, and at the Hague the nineteenth day of June, one thousand eight hundred and seventy-four.

[L. S.] MARSHALL JEWELL,
Postmaster-General of the United States.

[Translation.]

The undersigned, instructed to that end by royal decree of the 9th of June, 1874, No. 9, hereby declares it to be good and proper to confirm the foregoing agreement.

The Minister of Finance,
VON DELDEN.

I hereby approve the aforegoing additional article, and in testimony thereof I have caused the seal of the United States to be affixed.

[L. S.] U. S. GRANT.

By the President:
HAMILTON FISH,
Secretary of State.
WASHINGTON, 14*th September*, 1874.

ADDITIONAL ARTICLES OF AGREEMENT BETWEEN THE POST-OFFICE DEPARTMENT OF THE UNITED STATES AND THE DANISH POST DEPARTMENT,

modifying certain provisions of the convention for the regulation of the postal intercourse between the United States of America and the kingdom of Denmark, and of the detailed regulations and forms for the execution thereof, signed at Washington on the 1st of December, and at Copenhagen on the 7th of November, A. D. 1871.

ARTICLE I.

It being desirable that the provisions of said convention and detailed regulations shall conform to the new system of coinage to be introduced in Denmark on the 1st of January, 1875, described as the "crown coinage," under which the "crown" will be equal in value to one hundred öre, the equivalent of forty-eight Danish skilling rigsmónt of the present coinage, the following changes are hereby agreed to, viz:

1. That "twenty-five (25) öre" be substituted for "twelve (12) skilling rigsmónt" in Article 4, paragraph one, of the said convention.
2. That "twelve (12) öre" be substituted for "six (6) skilling rigsmónt" in Article 5 of the convention.
3. That "twelve (12) öre" be substituted for "six (6) skilling rigsmónt" in Article 6, paragraph one, of the convention.
4. That "sixteen (16) öre" be substituted for "eight (8) skilling rigsmónt" in Article 7, paragraph two, of the convention.
5. That "eight and one-third ($8\frac{1}{3}$) öre" be substituted for "four (4) skilling rigsmónt," and "one and one-third öre" for "two-thirds skilling rigsmónt" in Article 11, paragraph one, of the convention.
6. That "three crowns and seventy-seven öre" be substituted for "one rigsdaler and eighty-five skilling rigsmónt" in Article 12, paragraph two, of the convention.
7. That "three and three-fourths ($3\frac{3}{4}$) öre" be substituted for "$1\frac{4}{5}$ skilling" in Article 14 of the detailed regulations.
8. That the word "crown" be substitued for "Rd.," and "öre" for "sk.," in the forms of letter-bills and acknowledgments of receipt annexed to the detailed regulations.

ARTICLE II.

The change hereinbefore designated shall take effect on and after the 1st of January, 1875, and these additional articles of agreement shall have equal duration with the postal convention of $\frac{7 \text{ November}}{1 \text{ December}}$ 1871, between the United States and Denmark.

Done at Washington, in duplicate, and signed the 29 September, 1874, and at Copenhagen the 5th of September, 1874.

J. O. VIUM.

[L. S.] MARSHALL JEWELL,
Postmaster-General of the United States.

I hereby approve the aforegoing additional articles of agreement, and in testimony thereof, I have caused the seal of the United States to be affixed.

[L. S.] U. S. GRANT.

By the President:

JOHN L. CADWALADER,
Acting Secretary of State.

WASHINGTON, *September 30th*, 1874.

POSTAL CONVENTION BETWEEN THE EMPIRE OF JAPAN AND THE UNITED STATES OF AMERICA.

The undersigned, being thereunto duly authorized by their respective governments, have agreed upon the following articles, establishing and regulating the exchange of correspondence between the Empire of Japan and the United States of America:

ARTICLE I.

There shall be an exchange of correspondence between the United States of America and the Empire of Japan, by means of the direct line of United States mail-packets plying between San Francisco and Japan, as well as by such other means of direct mail steamship transportation between the United States and Japan, as shall hereafter be established, with the approval of the respective Post Departments of the two countries, comprising letters, newspapers, printed matter of every kind, and patterns and samples of merchandise, originating in either country, and addressed to and deliverable in the other country, as well as of correspondence of the same nature originating in or destined for foreign countries to which the United States and Japan may respectively serve as intermediaries.

ARTICLE II.

The post-office of San Francisco shall be the United States office of exchange, and Yokohama the office of exchange of the Empire of Japan, for all mails exchanged between the United States and Japan.

The two Post Departments, by agreement, may establish additional offices of exchange whenever it shall be found necessary.

ARTICLE III.

No accounts shall be kept between the Post Departments of the two countries upon the international correspondence, written or printed, exchanged between them, but each country shall retain to its own use the postages which it collects at the rates fixed by this convention.

The single rate of international letter-postage shall be fifteen cents in the United States and fifteen sen in Japan on each letter weighing fifteen grammes (½ ounce) or less, and an additional rate of fifteen cents or fifteen sen for each additional weight of fifteen grammes (½ ounce) or fraction thereof, which shall, in all cases, be prepaid one single rate by means of postage-stamps of the country of origin at the office of mailing in either country. Letters unpaid, or prepaid less than one full rate of postage, shall not be forwarded, but insufficiently-paid letters, on which a single rate or more has been prepaid, shall be forwarded, charged with the deficient postage, to be collected and retained by the Post De-

partment of the country of destination. Letters fully prepaid, received in either country from the other, shall be delivered free of all charge whatsoever.

It is, however, formally agreed that the single rate of international letter-postage shall be reduced to twelve cents in the United States and to twelve sen in Japan, at the expiration of twelve months from the date of carrying this convention into effect.

The United States post-office shall levy and collect to its own use, on newspapers addressed to or received from Japan, a postage-charge of two cents, and on all other articles of printed matter, patterns and samples of merchandize addressed to or received from Japan, a postage-charge of two cents for each weight of two ounces or fraction of two ounces.

The post-office of Japan shall levy and collect to its own use on newspapers and other articles of printed matter, patterns and samples of merchandize addressed to or received from the United States, the regular rates of Japanese domestic postage chargeable thereon by the laws and regulations of the Empire of Japan.

Newspapers and all other kinds of printed matter, patterns and samples of merchandise, shall be subject to the laws and regulations of each country respectively, prescribing the conditions of their publication and circulation, and also with regard to their liability to be rated with letter-postage when containing written matter, or for any other cause specified in said laws and regulations, as well as in regard to their liability to customs duty under the revenue laws of either country.

ARTICLE IV.

Every international letter insufficiently paid, received in the United States from Japan shall, in addition to the deficient postage, be subject to a fine of six cents, to be retained by the United States post-office; and every international letter insufficiently paid, received in Japan from the United States, shall, in addition to the deficient postage, be subject to a fine of six sen, such fine to be retained by the Japanese post-office.

ARTICLE V.

There shall be an exchange of correspondence between the Japanese post-offices of Yokohama, Hiogo and Nagasaki, and the United States postal agency at Shanghai, China, by means of United States or Japanese mail-packets plying regularly on the route between the ports of Japan and Shanghai, comprising letters, newspapers, printed matter of every kind, patterns and samples of merchandise, originating in Japan and addressed to Shanghai, or originating in Shanghai and addressed to Japan. The correspondence so forwarded in either direction between Japan and Shanghai shall give rise to no accounts between the two Post Departments, but each shall levy, collect, and retain to its own use the following postage-rates on the correspondence which it forwards to the other, the same to be in full of all charges to destination.

On correspondence from Shanghai for Japan, there shall be levied and collected at the United States Postal Agency at Shanghai, a postage of six cents per each single rate of half an ounce or under on letters, two cents each on newspapers and prices-current, and two cents per each weight of two ounces or fraction of two ounces on other articles of printed matter, patterns or samples of merchandise.

On correspondence from Japan for Shanghai, there shall be levied and collected at the office of mailing in Japan, a postage of six sen per each single rate of fifteen grammes or under on letters, and the established rates of Japanese domestic postage on other articles of printed matter, patterns or samples of merchandise.

Correspondence not fully prepaid to destination at the rates fixed by this article will not be forwarded.

ARTICLE VI.

Each country grants to the other the privilege of transit of closed mails exchanged in either direction between the latter and any country to which the other may serve as an intermediary, by its usual means of mail transportation, whether on sea or land.

The rates of postage to be paid by the Japanese Post Department to the United States Post Department for the territorial, or territorial and sea transit, of all correspondence in closed mails, sent or received through the United States for or from countries or places beyond, shall be as follows:

(1.) On closed mails, either for or from Mexico, British Columbia, Canada, and other British North American Provinces, when transmitted entirely by land-routes, six cents per thirty grammes for letter-mails, and thirty-two cents per kilogramme for all kinds of printed matter, patterns and samples of merchandise.

(2.) On closed mails either for or from British Columbia, or other British North American Provinces, Mexico, Central and South America, or the West India Islands, when transported to or from the United States by sea, twenty-five cents per thirty grammes for letter-mails, and forty cents per kilogramme for printed matter of all kinds, patterns and samples.

(3.) On closed mails either for or from Great Britain, Germany, and other countries of Europe, the same rates of territorial and sea postage as those established by the postal conventions between the United States and each of those countries respectively.

The rates of postage to be paid by the United States Post-Office to the Japanese Post-Office for the territorial, or territorial and sea transit of correspondence in closed mails sent through Japan for transmission to or from countries and places beyond, shall be agreed upon between the two Post Departments when the exercise of the privilege is required.

The country which sends or receives closed mails through the other shall render an account of the letters, newspapers, book-packets, and patterns contained in such closed mails.

ARTICLE VII.

The two Post Departments of the United States and Japan shall establish, by agreement, and in conformity with the arrangements in force at the time, the conditions upon which the two offices may reciprocally exchange, in open mails, the correspondence originating in or destined for foreign countries to which they may respectively serve as intermediaries.

It is always understood, however, that such correspondence shall only be charged with the rates applicable to direct international correspondence, augmented by the postage due to foreign countries, or by any other tax for exterior service.

ARTICLE VIII.

The United States Post-Office shall account to the Japanese Post-Office for the sum of two cents upon every single-paid letter from foreign countries sent through the United States in ordinary mails and prepaid to destination in Japan.

ARTICLE IX.

All passengers' letters sent back to the United States by passing mail steamers on the high seas, shall be paid in full, at ten cents per single rate, with United States postage-stamps; and all passengers' letters sent back to Japan by passing mail-steamers on the high seas, shall be paid in full at ten sen per single rate, with Japanese postage-stamps.

ARTICLE X.

The sea-postage for the conveyance across the Pacific Ocean of correspondence in open or closed mails, exchanged under the provisions of this convention, shall be computed at six cents per ounce or six sen per thirty grammes (net weight) on letter-mails, and six cents per pound or six sen per four hundred and eighty grammes (net weight) on other correspondence.

ARTICLE XI.

Letter-bills shall accompany each mail from one country to the other, containing an account of the weight of each class of correspondence, both international and transit; and the accounts arising between the two offices on the different classes of transit correspondence shall be stated, adjusted, and settled quarterly, and the balance found due on such correspondence shall be promptly paid over by the debtor office to the creditor office in such manner as the creditor office may desire.

ARTICLE XII.

So long as the Government of the United States shall maintain, at its own expense, the existing line of semi-monthly mail-steamers between San Francisco and Yokohama, it is mutually agreed that the Government of Japan shall defray the entire expenses of the sea transportation of all correspondence which shall be transmitted in either direction by any other line of mail-steamers plying between the sea-ports of the two countries.

ARTICLE XIII.

When in any port of either country a closed mail is transferred from one vessel to another, without any expense to the office of the country where the transfer is made, such transfer shall not be subject to any postal charge by one office against the other.

ARTICLE XIV.

Official communications, addressed by the United States Post-Office to the Japanese Post-Office, or by the Japanese Post Office to the United States Post-Office, shall not give rise to any account between the two offices.

ARTICLE XV.

The official correspondence between each government and its legation near the other shall be conveyed to its destination free of postage, and with all the precaution which the two Governments may find necessary for its inviolability and security.

ARTICLE XVI.

The two Post Departments may, by mutual agreement, provide for the transmission of registered articles in the mails exchanged between the two countries.

The register-fee on each registered article shall be ten cents in the United States and fifteen sen in Japan, and the ordinary postage thereon, as well as the register-fee, must always be fully prepaid.

Each office is at liberty to regulate this fee for the registered articles it dispatches.

ARTICLE XVII.

The two Post Departments shall settle by agreement between them all matters of detail and arrangement required to carry this convention into execution, and may modify the same in like manner, from time to time, as the exigencies of the service may require.

ARTICLE XVIII.

Every fully prepaid letter dispatched from one country to the other shall be plainly stamped with the words "*paid all*," *in red ink*, on the upper right-hand corner of the address, in addition to the date-stamp of the office at which it was posted; and on insufficiently-paid letters the amount of the deficient postage shall be inscribed in *black ink*.

ARTICLE XIX.

Dead letters which cannot be delivered, from whatever cause, shall be mutually returned without charge, monthly, or as frequently as the regulations of the respective offices will permit.

ARTICLE XX.

In converting Japanese currency into United States currency, or United States currency into Japanese currency, the United States dollar shall be considered the equivalent of the Japanese yen, and the United States cent as the equivalent of the Japanese sen.

ARTICLE XXI.

The United States post-office agrees that, upon a notice of six months being given by the Japanese post-office, at any time after the ratification of this Convention, the United States Postal Agency at Yokohama and all other United States Postal Agencies that are now, or that may hereafter be established within the limits of Japan, shall be discontinued.

ARTICLE XXII.

This convention shall go into effect upon the day on which the Postal Agencies of the United States in Japan shall be discontinued.

ARTICLE XXIII.

This convention shall be terminable at any time, on a notice by either office of one year. It is to be ratified and the ratifications are to be exchanged as soon as possible.

Done in duplicate original at the city of Washington, this 6th day of August, in the year of our Lord one thousand eight hundred and seventy-three, or the sixth day of the eighth month of the sixth year of Meiji.

[SEAL.] SAMRO TAKAKI,
His Imperial Japanese Majesty's Chargé d'Affaires, ad interim, to the United States of America.

[SEAL.] JNO. A. J. CRESWELL,
Postmaster-General of the United States.

I hereby approve the aforegoing convention, and in testimony thereof I have caused the seal of the United States to be affixed.

[SEAL.] U. S. GRANT.

By the President:
HAMILTON FISH,
Secretary of State.

WASHINGTON, *August 6th*, 1873.

[Translation.]

I hereby approve the aforegoing convention, and in testimony thereof I have caused the seal of the empire to be affixed.

[IMPERIAL SEAL.] MUTSU HITO.

By order of His Majesty:
TERASHIMA MUNENORI,
His Imperial Japanese Majesty's Minister for Foreign Affairs.

The 7th of 2d month, 7th year Meiji.

We, John A. J. Creswell, Postmaster-General of the United States, and Mr. Giro Yano, chargé d'affaires, *ad interim*, of Japan to the United States, certify that on this date we have proceeded to perform the exchange of ratifications of the Postal Convention which was concluded between the United States of America and the Empire of Japan, at Washington, on the 6th day of August, in the year of our Lord one thousand eight hundred and seventy-three, or the 6th day of the eighth month of the sixth year of Meiji.

Done in duplicate and signed at Washington this 18th day of April, A. D. 1874, or the 18th day of the fourth month of the seventh year of Meiji.

[SEAL.] JNO. A. J. CRESWELL,
Postmaster-General of the United States.

[SEAL.] GIRO YANO,
Chargé d'Affaires, ad interim, of Japan.

Detailed regulations for the execution of the postal convention between the United States and the Empire of Japan, concluded on the 6th of August, 1873.

For the purpose of carrying into operation the postal convention concluded on the 6th of August, 1873, between the United States of America and the Empire of Japan, and in pursuance of Article 17 of said convention, the following detailed regulations have been agreed upon between the two Post-Office Departments:

ARTICLE I.

Each mail exchanged between the respective exchange-offices shall be accompanied by a letter-bill following the Form A hereto annexed, and the receipt of each mail shall be acknowledged by the receiving-office by the next dispatch, in accordance with the form of acknowledgments of receipt hereto annexed, marked B.

Each mail exchanged between the United States postal agency at Shanghai and the Japanese post-offices of Yokohama, Hiogo, and Nagasaki, respectively, shall be accompanied by a letter-bill following the Form C, hereto annexed; its receipt shall be acknowledged by the next dispatch, in accordance with the Form D, hereto annexed.

ARTICLE II.

The correspondence dispatched from each exchange-office shall be made up in separate packages corresponding with the entries on the letter-bill. Each of these packages shall be wrapped in strong paper, tied with twine, and shall bear a label indicating the nature of the correspondence in English characters.

ARTICLE III.

The registered letters dispatched shall be described in a registered-letter list, following the model E, hereto annexed, and the total number of registered letters sent shall be entered in the corresponding blank on the letter-bill.

In case no registered articles are sent, the proper blank of the letter-bill shall be filled with the word "Nihil," or "Nil."

The package of registered letters sent in the mail shall be plainly inscribed with the word "Registered."

ARTICLE IV.

All letters exchanged in the mail shall bear the stamp of the office of origin and the date of mailing, and also the stamp of the exchange-office dispatching them.

Insufficiently-prepaid letters shall bear the stamp "Insufficiently-prepaid," and registered letters shall bear the stamp "Registered."

ARTICLE V.

In conformity with the requirements of Article VII of the convention, a table, F, is hereto annexed, showing the countries with which, and specifying the terms and conditions on which, Japan may exchange correspondence in the open mail through the United States.

ARTICLE VI.

The United States exchange-office shall mark in *black ink* in the upper left corner of the address of unpaid letters passing in transit through the United States, the amount of postage for exterior service due the United States on such letters, and, in like manner, but in *red ink*, shall mark on letters passing in transit through the United States prepaid to Japan, the amount due the Japanese office on such letters.

ARTICLE VII.

The accounts arising from the extranational correspondence shall be prepaid quarterly by the United States administration, shall be based upon the acknowledgments of receipt, and shall be promptly forwarded to the Japanese office for examination.

The amount found due shall be paid by the debtor to the creditor office in the money of the country of the creditor office.

ARTICLE VIII.

All correspondence wrongly addressed or missent shall be returned without delay by the receiving-office to the exchange-office which dispatched it.

ARTICLE IX.

The dispatching exchange-office shall state on the letter-bills to the intermediate exchange-offices the exact number of single rates of letters, or weight, if required, and the total weight of the other correspondence which shall be dispatched in closed mails.

Done in duplicate and signed in Washington on the 15th day of July, 1874.

[SEAL.] J. W. MARSHALL,
Postmaster-General.

[SEAL.] GIRO YANO,
His Imperial Japanese Majesty's Charge d'Affaires ad interim.

POST-OFFICE DEPARTMENT OF THE UNITED STATES. A. CORRESPONDENCE WITH JAPAN.

LETTER-BILL NO. —.

For the mail from San Francisco to Yokohama, sent the ———, by the steamer ———.

	Statement by the despatching exchange office.		Verification by the receiving exchange office.	
	No. of single rates.	Total weight, grams.	No. of single rates.	Total weight, grams.
TABLE I.—*International correspondence.*				
1. Letters, (ordinary and registered)				
2. Other correspondence				
TABLE II.—*Extranational correspondence.*	No. of single rates.	Amount.	No. of single rates.	Amount.
3. Prepaid letters, ordinary and registered, from countries beyond the United States addressed to Japan				
Amount due Japan at 2 cents a rate				
4. Unpaid letters from countries beyond the United States addressed to Japan				
Amount due United States for extranational service				

Total weight of the mail:
Letters, ——— grams.
Newspapers, ——— grams.

TABLE III.—*Registered Letters.*

Total number of registered letters sent in this mail:
International.....
Extranational.....

TABLE IV.—*Closed Mails.*

From—	To—	Number of bags.	Weight.	
			Letters, grams.	Printed matter, &c., grams.

———— ————,
Postmaster at San Francisco.

POST-OFFICE DEPARTMENT OF THE UNITED STATES. B. CORRESPONDENCE WITH JAPAN.

ACKNOWLEDGMENT OF RECEIPT.

For the mail sent from Yokohama to San Francisco on the ——, by the steamer ——, received the ——.

	Statement by the despatching exchange-office.		Verification by the receiving exchange-office.	
	Single rates.	Total weight.	Single rates.	Total weight.
TABLE I.—*International correspondence.*		gr.		gr.
1. Letters, (ordinary and registered)				
2. Other correspondence	—	—	—	—
TABLE II.—*Extranational correspondence.*	Single rates.	Amount.	Single rates.	Amount.
3. Prepaid letters from Japan addressed to countries beyond the U. S.				
Amount due United States for extranational service				

Total weight of the mail:
Letters, —— grams.
Prints, &c., —— grams.

TABLE III.—*Registered Letters.*

Total number of registered letters received in the mail:
International
Extranational

Amount of fees due the U. S. on extranational registered letters ..... $ Cts.

TABLE IV.—*Closed Mails.*

From—	To—	Number of bags.	Weight.	
			Letters, grams.	Printed matter, &c., grams.

——, ——,
Postmaster at San Francisco.

18 P M G

POST-OFFICE DEPARTMENT OF THE UNITED STAT S. POSTAL AGENCY AT SHANGHAI.

C.—LETTER-BILL No. —.

CORRESPONDENCE WITH JAPAN.

For the mail from Shanghai for ——, sent the ——, by the steamer ——.

The following are the contents of the mail:

Letters ..... { No. of single rates ..... / Amount prepaid, $ .....

Newspapers ..... { Total weight, gr ..... / Amount prepaid, $ .....

POST-OFFICE DEPARTMENT OF THE UNITED STATES. POSTAL AGENCY AT SHANGHAI.

D.—ACKNOWLEDGMENT OF RECEIPT.

CORRESPONDENCE WITH JAPAN.

The mail sent from —— to Shanghai on the ——, by the ——, was received on the ——, and contained the following:

Letters ..... { No. of single rates ..... / Amount prepaid .....

Newspapers, &c ..... { Total weight ..... / Amount prepaid .....

POST-OFFICE DEPARTMENT OF THE UNITED STATES.

E.

CORRESPONDENCE WITH JAPAN.

REGISTERED-LETTER LIST.

For the mail sent by the San Francisco office to the Yokohama office, the ——, 187—.

No.	Nature of the registered articles.	Origin.	To whom addressed.	Destination.
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

Total number of the registered articles to be carried to Table III of the letter-bill ——

Certified by—

——

Verified by

——

F.

Table showing the countries to which, and the terms and conditions on which, Japan may forward letters, newspapers, and prints of all kinds through the ordinary mails of the United States.

Countries.	Letters.		Newspapers.	Prints of all other descriptions.				
	For each ½ ounce or under.	Fee for registration.	For each not exceeding 4 ounces in weight.	Not exceeding 1 ounce in weight.	Exceeding 1 but not exceeding 2 ounces in weight.	Exceeding 2 but not exceeding 4 ounces in weight.	For every additional 4 ounces or fraction thereof.	
	Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	
Australia, except New South Wales, via San Francisco.	10	.....	2	*	.....	.....	.....	
Austria, via Bremen or Hamburg	6	8	3	2	4	6	6	P.
Austria, via Cologne	7	8	4	3	6	8	8	P.
Bahamas	3	.....	2	*	.....	.....	.....	
Belgium	8	8	4	.....	.....	8	8	P.
Belize, (British Honduras)	18	8	4	.....	.....	10	10	
Bermuda	10	.....	2	*	.....	.....	.....	
Bolivia	22	8	4	.....	.....	10	10	
Brazil	15	10	2	*	.....	.....	.....	
British Columbia	6	5	2	*	.....	.....	.....	
Canada	6	5	2	*	.....	.....	.....	
Chili	22	8	4	.....	.....	10	10	
Costa Rica	10	.....	2	*	.....	.....	.....	
Cuba	10	.....	2	*	.....	.....	.....	
Denmark	7	8	4	3	6	8	8	P.
Dominica	10	.....	2	*	.....	.....	.....	
Ecuador	20	.....	2	*	.....	.....	.....	
Egypt, via Bremen or Hamburg	16	8	9	4	8	12	12	
France, via direct steamer	10	.....	2	*	.....	.....	.....	
Germany, via Bremen or Hamburg	6	8	2	2	4	6	6	P.
Germany, via Cologne	7	8	3	3	6	8	8	P.
Gibraltar	16	16	4	4	8	12	12	
Great Britain and Ireland	6	8	2	2	4	6	6	P.
Greece, via Bremen or Hamburg	14	8	9	8	10	12	12	
Guatemala	10	.....	2	*	.....	.....	.....	
Hayti	10	.....	2	*	.....	.....	.....	
Holland	10	8	4	.....	.....	8	8	P.
Italy	10	8	4	.....	.....	8	8	P.
Malta	16	16	4	4	8	12	12	
Mexico	10	.....	2	*	.....	.....	.....	
Newfoundland	6	5	2	*	.....	.....	.....	
New South Wales	12	10	2	.....	.....	4	4	
New Zealand	12	10	2	.....	.....	4	4	
Nicaragua	10	.....	2	*	.....	.....	.....	
Norway	10	8	4	4	6	8	8	P.
Peru	22	8	4	.....	.....	10	10	
Portugal, via Bremen or Hamburg	11	8	6	3	6	9	9	
Prince Edward Island	6	5	2	*	.....	.....	.....	
Salvador	10	.....	2	*	.....	.....	.....	
Sandwich Islands	6	.....	2	.....	.....	4	4	
Spain, via Bremen or Hamburg	11	.....	6	3	6	9	9	
Sweden	9	8	4	4	6	8	8	P.
Switzerland	8	8	3	2	4	6	6	P.
Turkey, via Bremen or Hamburg	11	8	7	6	8	10	10	
Venezuela	10	.....	2	*	.....	.....	.....	
West Indies, (Danish)	10	.....	2	*	.....	.....	.....	
West Indies, not hereinbefore named	18	8	4	.....	.....	10	10	P.

The asterisk (*) indicates that the postage on prints other than newspapers is 2 cents per 2 ounces or fraction thereof.

The letter P in the last column indicates that patterns and samples may be sent at the rates given for prints of all other descriptions.

Total operations of the appointment office for the year ended June 30, 1874.

States and Territories.	Post-offices.				Postmasters.			
	Established.	Discontinued.	Names and sites changed.	Appointments on changes of name and site.	Resigned and commissions expired.	Removed.	Deceased.	Total number of changes
Alabama	118	59	17	6	127	30	5	
Alaska	2	1						
Arizona	3	6	1	1	8			
Arkansas	66	89	6	1	141	30	9	
California	72	19	10	2	83	17	6	
Colorado	29	7	7	3	49	4		
Connecticut	11	3	3	1	54	4	3	
Dakota	27	14	8	6	29	2	2	
Delaware	1	2			4		2	
District of Columbia					1	1		
Florida	30	36	5	2	23	10	2	
Georgia	90	21	9		124	19	5	
Idaho	19	6	1	1	11	1		
Illinois	95	57	27	8	296	40	14	
Indiana	59	26	10	2	305	36	14	
Iowa	62	39	14	6	277	30	13	
Kansas	139	45	35	26	218	37	2	
Kentucky	92	70	8	5	175	47	7	
Louisiana	30	31	5	1	65	30	5	
Maine	17	5	8	8	81	8	9	
Maryland	26	14	12	8	93	13	9	
Massachusetts	26	3	6	1	81	8	5	
Michigan	79	39	18	9	161	48	13	
Minnesota	67	28	13	9	102	38	4	
Mississippi	60	23	4	1	126	25	7	
Missouri	59	64	19	13	296	27	21	
Montana	11	18	1	1	19	2		
Nebraska	92	20	27	20	115	21	4	
Nevada	10	6	4	1	20	4	2	
New Hampshire	7	1	7	4	40	8	3	
New Jersey	19	10	3	1	45	10	4	
New Mexico	12	5			14	3	1	
New York	38	31	21	10	236	79	35	
North Carolina	127	54	18	7	167	33	12	
Ohio	72	59	16	6	307	30	33	
Oregon	25	20	2	2	59	4		
Pennsylvania	78	45	48	17	361	33	39	
Rhode Island	3	7			9	1	1	
South Carolina	41	30	3	2	60	4	3	
Tennessee	92	50	14	7	151	38	11	
Texas	129	60	12	7	227	54	16	
Utah	10	12	8		19	2	2	
Vermont	10	3	2	2	46	2	5	
Virginia	132	63	12	5	234	29	19	
Washington	24	12	7	4	40	6	3	
West Virginia	36	18	10	6	99	17	5	
Wisconsin	62	29	14	1	145	18	11	
Wyoming	9	8	2		11	4		
Total	2,318	1,268	477	223	5,354	907	36[illegible]	

Table showing the increase and decrease of post-offices in the several States and Territories; also the number of post-offices at which appointments are made by the President and by the Postmaster-General, for the year ended June 30, 1874.

States and Territories.	Whole number of post-offices in the United States June 30, 1873.	Whole number of post-offices in the United States June 30, 1874.	Increase.	Decrease.	Number of postmasters appointed by the President June 30, 1873.	Number of postmasters appointed by the President June 30, 1874.	Increase.	Decrease.	Number of postmasters appointed by the Postmaster-General June 30, 1873.	Number of postmasters appointed by the Postmaster-General June 30, 1874.	Increase.	Decrease.
Alabama	687	746	59	....	14	14	.....	....	673	732	59	....
Alaska	3	4	1	....	.....	.....	.....	....	3	4	1	....
Arizona	37	34	.....	3	1	2	1	....	36	32	.....	4
Arkansas	625	602	.....	23	5	7	2	....	620	595	.....	25
California	630	683	53	....	23	24	1	....	607	659	52	....
Colorado	145	167	22	....	9	8	.....	1	136	159	23	....
Connecticut	428	436	8	....	41	41	.....	....	387	395	8	....
Dakota	99	112	13	....	2	2	.....	....	97	110	13	....
Delaware	102	101	.....	1	4	4	.....	....	98	97	.....	1
District of Columbia	5	5	.....	....	2	2	.....	....	3	3	.....	....
Florida	187	181	.....	6	6	6	.....	....	181	175	.....	6
Georgia	587	656	69	....	22	22	.....	....	565	634	69	....
Idaho	53	66	13	....	2	2	.....	....	51	64	13	....
Illinois	1,792	1,830	38	....	122	127	5	....	1,670	1,703	33	....
Indiana	1,445	1,478	33	....	57	57	.....	....	1,388	1,421	33	....
Iowa	1,314	1,337	23	....	65	66	1	....	1,249	1,271	22	....
Kansas	887	981	94	....	33	34	1	....	854	947	93	....
Kentucky	1,009	1,031	22	....	24	24	.....	....	985	1,007	22	....
Louisiana	319	318	.....	1	7	7	.....	....	312	311	.....	1
Maine	845	857	12	....	24	23	.....	1	821	834	13	....
Maryland	569	581	12	....	12	12	.....	....	557	569	12	....
Massachusetts	699	722	23	....	102	102	.....	....	597	620	23	....
Michigan	1,128	1,168	40	....	63	68	5	....	1,065	1,100	35	....
Minnesota	744	783	39	....	19	18	.....	1	725	765	40	....
Mississippi	500	537	37	....	22	23	1	....	478	514	36	....
Missouri	1,454	1,449	.....	5	44	46	2	....	1,410	1,403	.....	7
Montana	101	94	.....	7	4	4	.....	....	97	90	.....	7
Nebraska	429	501	72	....	8	10	2	....	421	491	70	....
Nevada	82	86	4	....	8	10	2	....	74	76	2	....
New Hampshire	421	427	6	....	24	24	.....	....	397	403	6	....
New Jersey	626	635	9	....	44	46	2	....	582	589	7	....
New Mexico	48	55	7	....	2	2	.....	....	46	53	7	....
New York	2,794	2,801	7	....	152	156	4	....	2,642	2,645	3	....
North Carolina	897	970	73	....	10	12	2	....	887	958	71	....
Ohio	2,127	2,140	13	....	100	100	.....	....	2,027	2,040	13	....
Oregon	239	244	5	....	5	5	.....	....	234	239	5	....
Pennsylvania	3,039	3,072	33	....	116	120	4	....	2,923	2,952	29	....
Rhode Island	107	103	.....	4	10	10	.....	....	97	93	.....	4
South Carolina	420	431	11	....	13	13	.....	....	407	418	11	....
Tennessee	947	989	42	....	17	17	.....	....	930	972	42	....
Texas	749	818	69	....	25	30	5	....	724	788	64	....
Utah	168	166	.....	2	3	3	.....	....	165	163	.....	2
Vermont	475	482	7	....	19	19	.....	....	456	463	7	....
Virginia	1,270	1,339	69	....	21	22	1	....	1,249	1,317	68	....
Washington	126	138	12	....	2	3	1	....	124	135	11	....
West Virginia	696	714	18	....	8	10	2	....	688	704	16	....
Wisconsin	1,157	1,190	33	....	45	49	4	....	1,112	1,141	29	....
Wyoming	33	34	1	....	2	2	.....	....	31	32	1	....
Total	33,244	34,294	1,102	52	1,363	1,408	48	3	31,881	32,886	1,062	5

Statement of the operations of the free-delive

Name of post-office.	Number of carriers.	Delivered.					Collected	
		Mail.		Local.		Newspapers.	Letters.	Postal cards.
		Letters.	Postal cards.	Letters.	Postal cards.			
Albany, N. Y	23	2, 736, 684	129, 057	231, 711	86, 825	876, 651	2, 330, 692	111.
Allegheny, Pa	9	833, 241	46, 780	72, 780	16, 586	495, 720	391, 168	31.
Atlanta, Ga	5	396, 705	31, 729	19, 934	10, 425	123, 774	319, 357	30.
Baltimore, Md	60	5, 238, 979	274, 141	699, 570	325, 432	1, 361, 530	4, 549, 463	555.
Bangor, Me	5	64, 756	6, 126	4, 006	846	35, 514	104, 947	14.
Bloomington, Ill	5	219, 345	31, 789	21, 269	6, 573	136, 932	98, 645	22.
Boston, Mass	134	10, 060, 284	789, 211	3, 425, 220	707, 103	3, 423, 647	15, 148, 014	1, 347.
Brooklyn, N. Y	86	3, 836, 856	353, 305	781, 265	243, 582	1, 934, 768	2, 201, 588	291.
Buffalo, N. Y	34	3, 129, 889	178, 189	411, 653	144, 631	1, 352, 866	2, 271, 148	234.
Burlington, Iowa	6	164, 810	18, 167	15, 639	3, 891	136, 392	138, 403	16.
Camden, N. J	6	248, 481	21, 989	26, 950	9, 840	110, 423	116, 023	10.
Charleston, S. C	8	275, 419	22, 382	25, 610	11, 830	117, 887	307, 209	20.
Chicago, Ill	144	15, 544, 018	1, 404, 770	2, 893, 270	529, 230	3, 612, 106	27, 655, 325	2, 435.
Cincinnati, Ohio	53	4, 797, 694	227, 598	918, 959	151, 165	1, 074, 001	3, 509, 764	200.
Cleveland, Ohio	31	3, 136, 557	298, 232	379, 238	125, 338	1, 186, 433	2, 317, 947	30.
Columbus, Ohio	10	639, 761	61, 800	48, 872	20, 878	316, 298	458, 968	70.
Covington, Ky	4	210, 567	13, 176	12, 641	4, 051	95, 745	91, 684	5.
Davenport, Iowa	7	192, 632	30, 250	17, 564	7, 567	141, 393	173, 791	31.
Dayton, Ohio	12	960, 813	88, 910	81, 173	32, 504	496, 834	781, 493	155.
Des Moines, Iowa	6	315, 305	32, 861	30, 574	8, 135	200, 734	262, 142	21.
Detroit, Mich	31	4, 032, 678	325, 470	362, 429	95, 880	1, 621, 314	2, 074, 934	42.
Dubuque, Iowa	5	261, 224	31, 113	13, 135	4, 813	184, 034	202, 917	4.
Easton, Pa	6	284, 076	24, 778	24, 742	4, 371	115, 225	182, 433	8.
Elizabeth, N. J	6	356, 720	29, 814	53, 669	8, 813	200, 239	182, 251	14.
Elmira, N. Y	5	308, 829	33, 702	31, 534	5, 609	108, 461	157, 624	21.
Erie, Pa	7	560, 975	18, 428	44, 995	16, 315	420, 229	264, 187	17.
Evansville, Ind	6	427, 805	40, 188	19, 249	11, 421	286, 606	302, 255	36.
Fall River, Mass	8	225, 950	10, 752	204, 434	3, 676	145, 896	129, 884	9.
Fort Wayne, Ind	6	593, 141	38, 118	73, 401	29, 626	358, 833	516, 529	71.
Grand Rapids, Mich	6	654, 650	77, 091	66, 642	13, 860	238, 205	356, 007	46.
Harrisburgh, Pa	5	380, 717	22, 370	22, 496	4, 032	248, 266	144, 914	7.
Hartford, Conn	11	960, 334	45, 138	142, 172	23, 684	448, 491	579, 964	36.
Hoboken, N. J	4	100, 173	12, 622	8, 679	4, 976	36, 382	33, 617	3.
Indianapolis, Ind	26	2, 200, 959	178, 052	210, 384	82, 518	787, 720	1, 464, 069	257.
Jersey City, N. J	14	1, 024, 392	37, 539	108, 702	21, 319	7, 728	404, 406	9.
Kansas City, Mo	9	823, 312	74, 891	66, 998	16, 678	522, 904	489, 189	8.
La Fayette, Ind	4	207, 015	24, 527	8, 943	1, 777	144, 710	119, 700	12.
Lancaster, Pa	6	419, 467	41, 407	24, 352	10, 128	185, 253	117, 831	14.
Lawrence, Mass	8	635, 452	24, 211	39, 497	19, 187	435, 701	651, 908	57.
Leavenworth, Kans	5	160, 991	19, 272	10, 479	8, 019	105, 025	183, 894	13.
Louisville, Ky	26	2, 910, 550	191, 366	264, 923	133, 216	847, 029	1, 709, 429	179.
Lowell, Mass	8	640, 350	16, 571	45, 635	11, 470	266, 254	723, 681	19.
Lynn, Mass	7	502, 381	28, 436	37, 345	12, 900	244, 444	373, 283	2.
Manchester, N. H	7	627, 528	33, 992	25, 088	14, 511	348, 659	270, 966	34.
Memphis, Tenn	12	1, 376, 349	34, 683	107, 502	24, 722	309, 307	922, 873	9.
Milwaukee, Wis	24	2, 668, 313	157, 591	176, 835	83, 332	662, 697	1, 417, 081	169.
Minneapolis, Minn	7	351, 628	27, 115	29, 398	15, 062	356, 535	252, 254	27.
Mobile, Ala	7	166, 577	12, 151	13, 232	1, 515	114, 390	304, 152	3.
Nashville, Tenn	11	997, 983	56, 201	79, 668	17, 549	409, 041	549, 400	71.
Newark, N. J	21	1, 745, 247	158, 156	379, 859	123, 274	776, 316	1, 038, 101	132.
New Bedford, Mass	6	601, 206	12, 416	32, 346	7, 217	305, 984	276, 367	1.
New Haven, Conn	11	700, 161	39, 316	121, 872	13, 721	381, 532	512, 631	13.
New Orleans, La	45	2, 215, 457	194, 240	346, 315	175, 698	1, 027, 762	3, 105, 530	253.
New York, N. Y	379	32, 638, 200	1, 476, 138	19, 584, 001	2, 527, 625	7, 070, 690	50, 310, 191	3, 575.
Norfolk, Va	6	262, 137	32, 125	18, 893	9, 255	88, 428	348, 662	9.
Omaha, Nebr	6	412, 323	20, 879	53, 113	3, 390	198, 891	325, 519	11.
Oswego, N. Y	6	258, 955	26, 568	12, 198	6, 186	114, 391	188, 547	12.
Paterson, N. J	8	351, 501	14, 904	39, 763	5, 788	196, 559	189, 906	12.
Peoria, Ill	8	409, 221	45, 386	26, 032	10, 839	161, 567	384, 135	3.
Petersburgh, Va	5	117, 118	10, 261	5, 031	615	51, 272	74, 412	
Philadelphia, Pa	207	16, 086, 890	1, 199, 930	8, 394, 786	1, 565, 181	6, 319, 664	19, 608, 115	2, 6.
Pittsburgh, Pa	24	2, 060, 363	136, 425	318, 281	94, 161	825, 900	1, 689, 276	19.
Portland, Me	10	595, 111	32, 824	42, 758	14, 682	414, 877	781, 636	51.
Pottsville, Pa	4	114, 985	11, 546	10, 007	2, 315	85, 144	68, 185	
Poughkeepsie, N. Y	4	211, 849	14, 498	25, 391	9, 750	89, 508	228, 974	2.
Providence, R. I	15	996, 343	36, 012	215, 868	18, 128	466, 776	456, 781	14.
Quincy, Ill	7	358, 618	33, 016	32, 128	8, 827	288, 995	244, 970	30.
Reading, Pa	8	429, 457	38, 360	47, 498	15, 075	267, 449	271, 385	25.
Richmond, Va	16	1, 157, 651	100, 936	80, 955	30, 285	415, 991	701, 253	72.
Rochester, N. Y	20	2, 563, 050	99, 724	244, 776	84, 532	1, 239, 604	1, 647, 291	137.
Saint Joseph, Mo	6	235, 151	22, 826	15, 747	8, 181	175, 059	184, 269	2.
Saint Louis, Mo	100	9, 998, 490	625, 836	942, 197	535, 806	2, 135, 771	5, 481, 339	74.

system for the year ended June 30, 1874.

Pieces handled.			Cost of service.			Amount of local postage.	Remarks.
Newspapers.	Aggregate.	Per carrier.	Aggregate, including incidentals.	Per piece.	Per carrier.		
				Mills.			
185,838	6,688,835	267,553	$22,207 58	3.3	$888 30	$7,879 89	
31,184	1,918,633	213,181	7,560 93	3.9	840 10	5,598 87	
29,012	961,816	192,363	3,416 92	3.5	683 38	1,079 92	Established July 1, 1873.
257,670	13,262,134	221,035	59,906 10	4.5	998 43	23,765 60	
6,983	237,387	47,477	1,393 25	5.8	278 65	255 25	Established Feb. 1, 1874.
8,974	545,771	109,154	2,806 68	5.1	561 34	1,069 11	Established Sept. 1, 1873.
1,679,938	36,580,857	272,991	107,342 34	2.9	801 06	111,475 69	
223,679	9,871,956	114,790	70,977 54	7.2	825 32	34,608 66	
216,766	7,939,585	233,517	33,149 82	4.2	974 99	10,236 65	
26,307	520,311	86,718	2,986 95	5.7	497 82	664 65	Established October 1, 1873.
8,029	552,099	92,016	3,262 11	5.9	543 68	959 29	Established Sept. 1, 1873.
25,647	815,005	101,875	5,116 96	6.3	639 62	2,225 39	Established July 1, 1873.
5,368,437	59,442,773	412,797	133,791 43	2.25	929 11	63,862 80	
257,715	11,137,509	210,142	52,932 46	4.75	998 72	28,992 99	
254,783	8,000,564	258,083	29,227 77	3.65	942 83	12,906 44	
42,711	1,670,177	167,018	6,560 82	3.9	656 08	2,212 35	Do.
8,819	441,921	110,480	2,688 90	6.1	672 22	484 86	Do.
11,694	606,254	86,608	4,419 10	7.3	631 30	1,172 34	Do.
333,364	2,930,399	244,200	9,323 34	3.2	775 95	2,210 24	
35,769	908,648	151,441	3,560 02	3.9	593 34	1,339 42	Do.
239,954	9,175,468	295,983	26,947 95	2.9	869 29	9,907 86	
45,020	850,259	170,052	2,852 24	3.3	570 45	662 98	Do.
27,026	684,683	114,114	2,639 91	3.8	439 98	617 15	Established Dec. 1, 1873.
11,429	861,021	143,503	4,132 37	4.8	688 73	1,347 90	Established July 1, 1873.
11,851	682,086	136,417	2,575 98	3.8	515 20	1,127 31	Established October 1, 1873.
13,504	1,356,408	193,772	6,056 89	4.2	865 27	1,925 14	
23,713	1,162,149	193,691	4,089 41	3.5	681 57	738 70	Established July 1, 1873.
17,713	748,237	93,530	4,662 73	6.2	582 84	1,374 70	Established August 1, 1873.
39,925	1,721,114	286,852	3,520 44	2.04	586 74	2,314 21	Do.
24,788	1,474,126	245,687	3,448 05	2.3	574 67	2,032 29	Established Sept. 1, 1873.
8,677	838,584	167,717	3,536 71	4.2	707 34	1,253 87	
37,179	2,272,976	206,634	8,537 66	3.3	776 15	6,167 87	
1,765	202,197	50,549	1,797 34	8.9	449 33	335 38	Established Nov. 1, 1873.
211,901	5,372,908	206,650	20,153 93	3.7	775 15	5,714 76	
74,789	1,707,097	121,935	9,444 20	5.5	674 58	4,225 88	
88,889	2,168,950	240,994	6,319 84	2.45	702 20	4,250 63	Established July 1, 1873.
12,408	538,699	134,675	1,945 34	3.6	486 33	600 97	Established Nov. 1, 1873.
19,936	832,903	138,817	5,029 50	6.03	838 25	751 03	
47,480	1,881,428	235,178	17,363 03	3.9	920 38	1,274 57	
14,350	520,202	104,050	2,408 83	4.6	481 77	872 33	Established October 1, 1873.
188,674	6,415,640	246,755	26,536 91	4.1	1,020 65	7,544 98	
48,085	1,770,715	221,339	5,809 62	3.3	726 20	1,686 60	
33,469	1,262,003	180,286	6,061 52	4.8	865 93	1,239 77	
64,882	1,309,693	187,103	6,100 00	4.6	871 43	899 08	
95,492	2,900,596	241,883	9,021 91	3.1	751 83	2,145 07	
201,160	5,530,606	230,442	21,907 30	3.9	912 80	9,857 03	
31,004	1,091,485	155,926	5,211 55	4.8	744 51	1,943 91	Established August 1, 1873.
64,950	698,767	99,827	4,846 55	6.9	692 37	1,632 14	Established July 1, 1873.
37,476	2,204,731	200,430	9,283 19	4.2	843 84	2,360 40	
63,391	4,409,760	209,988	21,065 87	4.8	1,003 13	9,834 68	
14,709	1,265,824	210,971	4,694 73	3.7	782 45	1,285 49	
43,532	1,829,925	166,357	9,957 50	5.4	905 23	4,723 66	
724,004	8,042,942	178,732	37,964 27	4.7	843 65	30,462 67	
3,633,885	120,816,101	318,776	353,502 79	2.9	930 09	837,640 20	
23,882	809,673	134,945	3,355 70	4.1	559 28	1,117 44	Established Sept. 1, 1873.
38,499	1,070,177	178,363	3,834 69	3.6	639 11	1,443 98	Established July 1, 1873.
13,922	649,126	108,188	3,175 79	4.9	529 30	401 78	Established October 1, 1873.
30,190	841,025	105,128	5,321 06	6.3	665 13	1,362 69	Established July 1, 1873.
58,795	1,161,428	145,178	5,549 55	4.8	693 69	1,044 20	Do.
5,032	271,991	54,398	1,964 83	7.2	392 96	316 57	Established Jan. 1, 1874.
3,266,355	58,439,542	282,316	213,887 16	3.7	1,033 27	200,915 67	
137,756	5,442,995	226,791	19,193 86	3.5	799 74	11,147 29	
66,638	2,002,288	200,228	8,767 24	4.3	876 72	2,831 20	
18,059	319,250	79,812	1,677 48	5.3	419 37	573 35	Established Dec. 1, 1873.
19,936	629,642	157,410	2,790 58	4.4	697 54	1,641 85	Established July 1, 1873.
14,028	2,220,397	148,026	12,755 31	5.7	850 35	10,059 22	
34,205	1,031,504	147,358	4,661 02	4.5	665 86	1,222 10	Do.
15,902	1,107,530	138,441	6,805 89	6.1	850 74	1,440 20	
79,296	2,639,181	164,949	12,128 32	4.6	758 02	2,679 29	
191,283	6,183,638	309,182	17,082 87	2.8	854 14	8,874 43	
42,756	714,747	119,124	3,147 10	4.4	524 52	982 17	Established October 1, 1873.
737,210	21,190,181	211,901	93,335 92	4.4	933 36	25,878 28	

Statement of the operations of the free-delivery

Name of post-office.	Number of carriers.	Delivered.					Collected.	
		Mail.		Local.		Newspapers.	Letters.	Postal cards.
		Letters.	Postal cards.	Letters.	Postal cards.			
Saint Paul, Minn ..	8	467, 732	31, 847	24, 444	14, 695	239, 577	600, 110	80 61[illegible]
Salem, Mass.....	6	323, 744	22, 104	36, 703	5, 849	222, 871	257, 232	16 42[illegible]
San Francisco, Cal.	36	1, 700, 623	86, 660	553, 865	164, 360	630, 182	2, 992, 130	219, 4[illegible]
Savannah, Ga	6	349, 359	22, 504	33, 105	9, 168	85, 187	331, 319	31, 0[illegible]
Springfield, Ill	4	205, 742	27, 819	10, 735	4, 298	155, 471	91, 020	15, 17[illegible]
Springfield, Mass ..	8	535, 138	52, 221	70, 516	13, 047	183, 814	392, 734	36 4[illegible]
Syracuse, N. Y....	15	1, 642, 028	70, 932	185, 544	52, 563	790, 195	649, 840	80 6[illegible]
Toledo, Ohio	13	1, 216, 124	91, 984	85, 317	53, 031	492, 681	1, 040, 408	165, 3[illegible]
Trenton, N. J	5	418, 825	26, 253	26, 081	12, 096	213, 903	295, 928	30, 6[illegible]
Troy, N. Y.....	15	1, 677, 673	134, 113	183, 790	52, 978	675, 220	1, 102, 599	148, 6[illegible]
Utica, N. Y	13	1, 052, 333	83, 982	102, 110	19, 150	425, 293	798, 130	81, 6[illegible]
Washington, D. C .	35	2, 293, 795	91, 048	319, 297	72, 136	1, 098, 723	1, 789, 676	102, 9[illegible]
Wheeling, W. Va..	5	298, 654	30, 067	19, 512	5, 491	183, 004	300, 409	35, 3[illegible]
Williamsburgh, NY	14	248, 699	23, 079	14, 642	4, 473	91, 373	101, 298	7, 5[illegible]
Wilmington, Del ..	11	674, 707	33, 707	91, 153	24, 177	362, 601	311, 332	25, 6[illegible]
Worcester, Mass ..	10	632, 395	62, 096	68, 210	32, 650	301, 989	383, 585	42, 1[illegible]
Total.....	2, 049	166, 020, 370	11, 000, 809	45, 179, 295	8, 958, 106	56, 468, 582	177, 898, 474	16, 2[illegible]
Salary of special agents of Post-Office Department paid out of the appropriation for letter-carriers....								
Total								

system for the year ended June 30, 1873—Continued.

	Pieces handled.		Cost of service.			Amount of local postage.	Remarks.
Newspapers.	Aggregate	Per carrier.	Aggregate, including incidentals.	Per piece.	Per carrier.		
				Mills.			
99,370	1,567,393	195,924	$5,060 68	3.3	632 58	2,179 30	Established August 1, 1873.
31,073	916,003	152,667	5,289 00	5.8	881 50	1,063 19	
321,771	6,669,483	185,263	34,998 06	5.2	972 11	16,645 59	
19,779	881,520	146,920	4,033 94	4.6	672 32	1,750 30	Established July 1, 1873.
23,190	533,429	133,357	2,250 10	4.2	562 52	719 85	Established Sept. 1, 1873.
33,676	1,249,994	156,249	4,636 43	3.7	579 55	2,880 85	Established August 1, 1873.
175,636	3,677,196	245,146	13,016 08	3.5	867 74	4,724 25	
163,292	3,308,221	254,478	10,810 19	3.3	831 55	2,850 32	
16,093	1,029,097	205,819	4,007 99	3.9	801 60	1,739 28	
201,121	4,168,120	277,874	12,528 59	3.00	835 24	4,987 53	
69,085	2,631,726	202,440	11,222 71	4.3	863 28	2,537 85	
294,208	6,001,821	171,480	34,033 78	5.7	972 39	14,149 29	
29,129	901,619	180,324	3,031 38	3.4	606 28	846 74	Do.
7,752	498,861	35,633	2,868 40	5.7	204 89	292 84	Discontinued Sept. 30, 1873.
22,539	1,445,860	131,442	9,018 49	6.2	819 86	2,564 72	
25,703	1,548,822	154,822	8,575 31	5.5	857 53	3,866 43	
21,562,436	503,386,397	.....	1,796,872 58	3.58	877 84	1,611,481 66	
.....	.....	.....	5,823 83				
.....	.....	.....	1,802,696 41				

Statement of the operations of the free-delivery

Name of post-office.	Number of carriers.	Delivered.					Collected.	
		Mail.		Local.		Newspapers.	Letters.	Postal cards.
		Letters.	Postal cards.	Letters.	Postal cards.			
Saint Paul, Minn ..	8	467, 732	31, 847	24, 444	14, 695	239, 577	600, 110	89, 6[illegible]
Salem, Mass.....	6	323, 744	22, 104	36, 703	5, 849	222, 871	257, 232	16, 4[illegible]
San Francisco, Cal.	36	1, 700, 623	86, 660	553, 865	164, 360	630, 182	2, 992, 130	219, [illegible]
Savannah, Ga	6	349, 359	22, 504	33, 105	9, 168	85, 187	331, 319	31, 0[illegible]
Springfield, Ill	4	205, 742	27, 819	10, 735	4, 298	155, 471	91, 020	15, 15[illegible]
Springfield, Mass ..	8	535, 138	59, 221	70, 516	13, 047	183, 814	392, 734	38, [illegible]
Syracuse, N. Y....	15	1, 642, 028	70, 932	185, 544	52, 563	720, 195	649, 840	80, [illegible]
Toledo, Ohio	13	1, 216, 124	91, 984	85, 317	53, 031	492, 681	1, 040, 40[illegible]	165, [illegible]
Trenton, N. J	5	418, 825	26, 253	26, 081	12, 096	213, 203	295, 928	28, 6[illegible]
Troy, N. Y.....	15	1, 677, 673	134, 113	183, 790	52, 978	675, 220	1, 102, 599	140, [illegible]
Utica, N. Y	13	1, 052, 333	83, 982	102, 110	19, 150	425, 293	798, 130	81, [illegible]
Washington, D. C .	35	2, 293, 795	91, 048	319, 297	72, 136	1, 098, 723	1, 729, 676	102, [illegible]
Wheeling, W. Va..	5	298, 654	30, 067	19, 512	5, 491	183, 004	360, 409	35, [illegible]
Williamsburgh, NY	14	248, 699	23, 079	14, 642	4, 473	91, 373	101, 298	7, [illegible]
Wilmington, Del ..	11	674, 707	33, 707	91, 153	24, 177	362, 601	311, 332	25, [illegible]
Worcester, Mass ..	10	632, 395	62, 096	68, 210	32, 650	301, 989	383, 565	42, [illegible]
Total.....	2, 049	166, 020, 370	11, 000, 809	45, 179, 295	8, 958, 106	56, 468, 582	177, 898, 474	16, 294, [illegible]
Salary of special agents of Post-Office Department paid out of the appropriation for letter-carriers...								
Total								

system for the year ended June 30, 1873—Continued.

	Pieces handled.		Cost of service.				
Newspapers.	Aggregate	Per carrier.	Aggregate, including incidentals.	Per piece.	Per carrier.	Amount of local postage.	Remarks.
				Mills.			
99, 370	1, 567, 393	195, 924	$5, 060 68	3. 3	632 58	2, 179 30	Established August 1, 1873.
31, 073	916, 003	152, 667	5, 289 00	5. 8	881 50	1, 063 19	
321, 771	6, 669, 483	185, 263	34, 998 06	5. 2	972 11	16, 645 59	
19, 779	881, 520	146, 920	4, 033 94	4. 6	672 32	1, 750 30	Established July 1, 1873.
23, 190	533, 499	133, 357	2, 250 10	4. 2	562 52	719 85	Established Sept. 1, 1873.
33, 676	1, 249, 994	156, 249	4, 636 43	3. 7	579 55	2, 880 85	Established August 1, 1873.
175, 636	3, 677, 196	245, 146	13, 016 08	3. 5	867 74	4, 724 25	
163, 292	3, 308, 221	254, 478	10, 810 19	3. 3	831 55	2, 850 32	
16, 093	1, 029, 097	205, 819	4, 007 99	3. 9	801 60	1, 739 28	
201, 121	4, 168, 120	277, 874	12, 528 59	3. 00	835 24	4, 987 53	
69, 085	2, 631, 796	202, 440	11, 222 71	4. 3	863 28	2, 537 85	
274, 208	6, 001, 821	171, 480	34, 033 78	5. 7	972 39	14, 149 29	
29, 129	901, 619	180, 324	3, 031 38	3. 4	606 28	846 74	Do.
7, 752	498, 861	35, 633	2, 868 40	5. 7	204 89	292 84	Discontinued Sept. 30, 1873.
22, 539	1, 445, 860	131, 442	9, 018 49	6. 2	819 86	2, 564 72	
25, 703	1, 548, 822	154, 822	8, 575 31	5. 5	857 53	3, 866 43	
21, 562, 436	503, 386, 397	.....	1, 796, 872 58	3. 58	877 84	1, 611, 481 66	
.....	.....	.....	5, 823 83				
.....	.....	.....	1, 802, 696 41				

POST-OFFICE DEPARTMENT, MONEY-ORDER OFFICE,
November 6, 1874.

SIR: By the act approved July 27, 1868, the fees to be charged for the issue of money-orders were fixed as follows: On all orders not exceeding $20, 10 cents; on all orders over twenty and not exceeding thirty dollars, 15 cents; on all orders over thirty and not exceeding forty dollars, 20 cents; and on orders over forty and not exceeding fifty dollars, 25 cents. This schedule of fees was modified by the act approved June 8, 1872, which went into effect July 1, 1872, reducing the fee on all orders not exceeding $10 to 5 cents. The loss to the Department, on account of this reduction, is estimated at $60,668.99 during the year ended June 30, 1873, and $75,970.54 during the year following. Within the last fiscal year 4,420,633 money-orders were issued, at an average cost, including their payment, of $7\frac{84}{100}$ cents each, and the average amount received for the issue and payment of these orders was $10\frac{44}{100}$ cents each, showing an average revenue of $2\frac{60}{100}$ cents derived from each order issued. Of these orders, however, not less than 1,936,044 were issued and paid for a fee of 5 cents, or at a loss of $2\frac{84}{100}$ cents each, and this loss was made up by the issue of orders upon which a fee of 10 cents or more was charged. At the present time the salaries of the Superintendent and employés of the Money-Order Office in Washington, the salaries of the employés of the Money-Order Division of the Office of the Auditor of the Treasury for the Post-Office Department, and the cost of books, blanks, stationery, and printing, are paid out of appropriations made by Congress, therefore no account of them is taken in the above calculation. It is estimated that 5,260,000 money-orders will be issued during the year to end June 30, 1875, being an increase of about 18 per cent., and that the expenses of the system will reach $410,000, the addition to which of the cost of clerical labor, printing, blanks, &c., heretofore paid out of appropriations, and estimated at $210,320, will increase the expenses of the system to $620,320.

I consider the present practice of issuing money-orders at less than their cost unwise, and I would therefore urgently recommend the adoption of the following modified schedule of fees, viz: On orders not exceeding fifteen dollars, 10 cents; on orders over fifteen and not exceeding thirty dollars, 15 cents; on orders over thirty and not exceeding forty dollars, 20 cents; and on orders over forty and not exceeding fifty dollars, 25 cents. It is estimated that if the above rates had been established on the 1st of July last, the receipts in fees during the current fiscal year ending June 30, 1875, would reach $691,712.65, from which, after the payment of all the expenses of the system, a net revenue of $71,392.65 would accrue to the United States for the service of this Department. An estimate in detail of the receipts and expenditures for the fiscal year 1875, upon the above basis, is herewith submitted. With the adoption of this schedule I further recommend that the Postmaster-General be authorized to contract with the lowest bidder for the books, blanks, stationery, and printing for the transaction of the money-order business, unless the same, or a portion thereof, can be furnished at equally low rates by the Congressional Printer; and, also, to pay out of the proceeds of the money-order business the compensation of the Superintendent and other employés of the Money-Order Office in this Department, and that he be further authorized to place, from time to time, to the credit of the Treasurer of the United States, out of the proceeds of said business, such sums as may be necessary

to defray the cost of clerical labor in the Money-Order Division of the Auditor of the Treasury for the Post-Office Department.

I have the honor to be, sir, your obedient servant,

C. F. MACDONALD,
Superintendent.

Hon. MARSHALL JEWELL,
Postmaster-General.

MONEY-ORDER OFFICE.

Estimate of receipts and expenditures for year ending June 30, 1875, upon the basis of the following schedule of fees:

		Cents.
For orders not exceeding $15		10
For orders over $15 and not exceeding $30		15
For orders over $30 and not exceeding $40		20
For orders over $40 and not exceeding $50		25
Total amount of fees		$691,712 65
Allowances to postmasters for commissions, clerk-hire, lost remittances, &c	$410,000	
Salaries in Superintendent's Office	35,320	
Salaries in Auditor's Office	90,000	
Books, blanks, and printing	75,000	
Stationery	10,000	
		620,320 00
Balance, being revenue		71,392 65

Items of expenditure during the fiscal year ended June 30, 1874, not charged to the money-order system but paid out of regular appropriations.

Salaries in Superintendent's Office	$31,600
Salaries in Auditor's Office	83,500
Books, blanks, and printing for Superintendent's Office	50,000
Books, blanks, and printing for Auditor's Office	10,000
Stationery	7,000
Total	182,100

REPORT OF THE AUDITOR OF THE TREASURY FOR THE POST-OFFICE DEPARTMENT.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
October 10, 1874.

SIR: I have the honor to submit the following report of the receipts and expenditures of the Post-Office Department, together with the operations of this office in connection therewith, for the fiscal year ended June 30, 1874:

COLLECTION OF POST-OFFICE REVENUES.

The number of post-offices in operation during the year was 35,450, which are thus classified under the regulations adopted for the government of the Department.

The following-named offices, seventy-one in number, are denominated depositories, and are required by the Postmaster-General to receive and retain, subject to the drafts of the Department, the funds of certain adjacent offices, as well as the revenues of their own:

List of offices designated as depositories, with names of postmasters.

Albany, N. Y.	J. F. Smyth.
Atlanta, Ga.	Saml. Bard.
Bangor, Me.	A. B. Farnham.
Batavia, N. Y.	Wm. Tyrrell.
Binghamton, N. Y.	E. B. Stephens.
Buffalo, N. Y.	J. M. Schemerhorn.
Cleveland, Ohio	John W. Allen.
Columbus, Ohio	Jas. M. Comly.
Concord, N. H	M. T. Willard.
Davenport, Iowa	Edward Russell.
Des Moines, Iowa	J. S. Clarkson.
Detroit, Mich	F. W. Swift.
Dover, Del	F. A. Smith.
Dubuque, Iowa	G. L. Torbert.
Easton, Pa	J. K. Dawes.
Evansville, Ind	T. R. McFerson.
Fort Wayne, Ind.	J. J. Kamm.
Geneva, N. Y	Chas. L. Hemiup.
Grand Rapids, Mich.	A. B. Turner.
Harrisburgh, Pa.	Geo. Bergner.
Hartford, Conn	John H. Burnham.
Huntsville, Ala.	J. D. Sibley.
Indianapolis, Ind	W. R. Holloway.
Kalamazoo, Mich	L. B. Kendall.
Keene, N. H	H. C. Henderson.
Knoxville, Tenn	William Rule.
Lafayette, Ind	J. L. Miller.
Lancaster, N. H	John W. Spalding.
Leavenworth, Kans	D. R. Anthony.
Lexington, Ky	S. W. Price.
Lima, Ohio	C. Parmenter.
Louisville, Ky	L. M. Porter.
Lowell, Mass	E. T. Rowell.
Madison, Wis	E. W. Keyes.
Meadville, Pa	L. D. Williams.
Memphis, Tenn	J. Deloach.
Milwaukee, Wis	S. C. West.
Mobile, Ala	M. D. Wickersham.
Montpelier, Vt	J. W. Clark.
Nashville, Tenn	H. W. Hasslock.
Newark, N. J	Wm. Ward.
New Haven, Conn.	N. D. Sperry.
Ogdensburgh, N. Y.	R. G. Pettibone.
Olean, N. Y.	J. G. Johnson.
Peoria, Ill	D. W. Magee.
Pittsburgh, Pa	E. C. Negley.
Plattsburgh, N. Y.	H. S. Ransom.
Portland, Me.	C. W. Goddard.
Portsmouth, Ohio	L. Adair.
Providence, R. I.	E. S. Jackson.
Quincy, Ill.	M. Piggott.
Raleigh, N. C	W. W. Holden.
Richmond, Va.	E. L. Van Lew.
Ripon, Wis.	H. S. Town.
Rochester, N. Y	E. M. Smith.
Rutland, Vt.	A. H. Tuttle.
Sandusky, Ohio	A. C. Van Tine.
Scranton, Pa.	J. A. Scranton.
Springfield, Ill.	J. L. Crane.
Springfield, Mass.	H. C. Lee.
Steubenville, Ohio.	J. M. Reede.
Saint Paul, Minn.	J. A. Wheelock.
Syracuse, N. Y.	D. H. Bruce.
Urbana, Ohio.	D. C. Hilt.
Utica, N. Y	C. H. Hopkins.
Vincennes, Ind	W. N. Denny.
Wheeling, W. Va.	C. J. Rawlings.
Williamsport, Pa.	Robert Hawley.
Wooster, Ohio	A. L. McClure.
Worcester, Mass.	Josiah Pickett.
Zanesville, Ohio	J. J. Douglas.

The following depositaries and assistant treasurers receive and retain, subject to the warrants of the Post-Office Department, the funds of such post-offices as are instructed to deposit in their hands:

Designated depositaries.

S. J. Holly.....Buffalo, N. Y.	J. Cushman.....Olympia, W. T.
E. W. Little.....Santa Fé, N. M.	Thomas Steel.....Pittsburgh, Pa.
J. P. Luce.....Louisvillle, Ky.	C. H. Lorde.....Tucson, Arizona.

Assistant treasurers.

Thomas Hillhouse...New York, N. Y.	C. H. Baldwin.....Charleston, S. C.
George Eyster.....Philadelphia, Pa.	W. E. Davis.....Cincinnati, Ohio.
Peter Negley.....Baltimore, Md.	J. D. Webster.....Chicago, Ill.
F. Haven, jr.....Boston, Mass.	A. G. Edwards.....Saint Louis, Mo.
B. F. Flanders.....New Orleans, La.	William Sherman...San Francisco, Cal.

One hundred and thirty post-offices are draft-offices, and during the year paid 17,909 drafts issued by the Postmaster-General, countersigned, entered and sent out by the Auditor, for sums in the aggegate of.....	$2,293,723 27
Forty-five hundred and twenty-seven offices are deposit-offices, a portion of which during the year deposited with the Treasurer and assistant treasurers of the United States the sum of.....	5,421,112 43
The remaining deposit-offices deposited with the depositaries named above the sum of $867,275.10, which is embraced in the $2,293,723.27, paid on the drafts of the Department by said depositaries and draft-offices.	
Twenty-five thousand six hundred and ninety offices are collection-offices, and paid on collection-orders issued to mail-contractors the sum of.....	3,640,667 96
Five thousand and thirty-two offices are special and mail-messenger offices, and derive their mail-supplies by the payment of the revenue of their offices therefor, amounting to.....	630,004 31
The amount paid into the Treasury by postmasters for the use and purposes of the Post-Office Department during the fiscal year was.....	11,985,507 97

REVENUE ACCOUNT OF THE POST-OFFICE DEPARTMENT.

The receipts of the Department for the fiscal year ended June 30, 1874, were.....		$26,471,071 82
The amount placed in the Treasury for the service of the Department for the fiscal year, being grants in aid of the revenues under the following acts of Congress, were:		
Under the second section of the act approved March 3, 1873, for mail-steamship service between San Francisco, Japan, and China.....	$500,000 00	
Under the second section of the act approved March 3, 1873, for mail-steamship service between the United States and Brazil.....	150,000 00	
Under the second section of the act approved March 3, 1873, for mail-steamship service between San Francisco and the Sandwich Islands. (The sum of $56,250 was drawn under this act, of which amount $43,750 was subsequently deposited to the credit of the appropriation).....	12,500 00	
Under the second section of the act approved March 3, 1869, for supplying deficiency in the revenue of the Post-Office Department for the fiscal year ended June 30, 1870.....	3,541 47	
Under the first section of the act approved March 3, 1871, for supplying deficiency in the revenue of the Post-Office Department for the fiscal year ended June 30, 1871.....	1,007,444 85	
Under the third section of the act approved March 3, 1871, for supplying deficiency in the revenue of the Post-Office Department for the fiscal year ended June 30, 1872	18,397 66	
Under the fourth section of the act approved June 1, 1872, for supplying deficiency in the revenue of the Post-Office Department for the fiscal year ended June 30, 1873	333,947 56	

Under the third section of the act approved March 3 1873, for supplying deficiency in the revenue of the Post-Office Department for the fiscal year ended June 30, 1874	$3,896,602 00	
		$5,922,[illegible]
Aggregate of revenue and grants		32,393,505 [illegible]
The expenditures of the Department for the fiscal year ended June 30, 1874, were		32,126,414 [illegible]
Excess of receipts		267,090 79

The net revenue of the Department from postages, being the aggregate of balances due the United States by postmasters on the adjustment of their quarterly accounts for the year, after deducting their compensation and the expenses of their offices, was:

For the quarter ended September 30, 1873	$3,674,122 52
For the quarter ended December 31, 1873	3,593,883 54
For the quarter ended March 31, 1874	4,016,432 [illegible]
For the quarter ended June 30, 1874	3,677,687 61
Total	14,962,125 92

The amount of book, newspaper, and pamphlet postage paid in money was:

For the quarter ended September 30, 1873	$342,658 [illegible]
For the quarter ended December 31, 1873	349,354 [illegible]
For the quarter ended March 31, 1874	353,195 14
For the quarter ended June 30, 1874	341,165 [illegible]
Total	1,386,374 [illegible]

The amount of letter-postage paid in money was:

For the quarter ended September 30, 1873	$76,187 [illegible]
For the quarter ended December 31, 1873	75,298 [illegible]
For the quarter ended March 31, 1874	89,260 [illegible]
For the quarter ended June 30, 1874	85,557 [illegible]
Total	326,295 [illegible]

The amount of stamps, stamped envelopes, postal cards, and newspaper-wrappers sold was:

For the quarter ended September 30, 1873	$6,355,160 [illegible]
For the quarter ended December 31, 1873	5,291,396 [illegible]
For the quarter ended March 31, 1874	5,752,501 [illegible]
For the quarter ended June 30, 1874	5,989,664 [illegible]
Total	23,388,722 [illegible]

The amount of official stamps furnished the different Departments, and included in the above amount of stamps sold, was:

To the Executive Office	$600 [illegible]
To the Department of State	23,389 [illegible]
To the Navy Department	21,179 [illegible]
To the War Department	74,571 [illegible]
To the Agricultural Department	34,680 [illegible]
To the Interior Department	129,991 [illegible]
To the Department of Justice	5,[illegible]
To the Treasury Department	499,000 [illegible]
To the Post-Office Department	970,000 [illegible]
Total	1,759,301 [illegible]

The number of quarterly returns of postmasters received and audited, on which the sum of $14,962,125.92 was found due the United States, was:

For the quarter ended September 30, 1873	32,21[illegible]
For the quarter ended December 31, 1873	32,95[illegible]
For the quarter ended March 31, 1874	33,17[illegible]
For the quarter ended June 30, 1874	32,9[illegible]
Total	131,29[illegible]

MAIL-TRANSPORTATION.

The amount charged to transportation accrued and placed to the credit of mail-contractors and others for mail-transportation during the year, was—

For the regular service of mail-routes		$15,148,709 74
For the supply of special and mail-messenger offices		629,974 31
For the salaries of postal-railway clerks, route, and other agents		2,115,764 83
For the salaries and per diem of the assistant superintendents of the postal-railway service		56,098 04
		17,950,546 92

Foreign mail-transportation.

San Francisco, Japan, and China	$500,000 00	
San Francisco and the Hawaiian Islands	12,500 00	
United States and Brazil	150,000 00	
San Francisco, Japan, and China, (extra service)	6,262 69	
New York and Rio de Janeiro	67 62	
New York, Great Britain, and Ireland	142,609 89	
Boston and Great Britain	4,115 37	
Portland, Detroit, Chicago, and Great Britain	6,731 32	
Boston, Portland, and Nova Scotia	1,608 12	
Boston and Prince Edward Island	106 07	
New Orleans and Vera Cruz	56 77	
New York and San Francisco via Panama	25,782 33	
New York, West Indies, and Bermuda	10,873 83	
Baltimore, Havana, and New Orleans	3,336 55	
New York, Havana, and Vera Cruz, and Philadelphia and Havana	54,167 07	
New Orleans, Havana, France, and Spain	107 85	
New York, England, France, and Germany	71,218 18	
New York, New Granada, Venezuela, and the United States of Colombia	998 62	
New York, Baltimore, and Bremen	10,130 00	
Philadelphia, England, and Belgium	465 32	
Cleveland and Canada	45 40	
New York, Belgium, and Norway	19 11	
Expenses of Government mail-agent at Havana	800 00	
Expenses of Government mail-agent at Panama	1,485 15	
Expenses of Government mail-agent at Aspinwall	940 00	
Expenses of Government mail-agent at Hioga, Japan	625 00	
		1,005,052 26
		18,955,599 18

The amount credited to transportation accrued and charged to contractors was—

For fines imposed	$1,710 60	
For deductions	65,125 17	
		66,835 77
Net amount to the credit of mail-contractors and others		18,888,763 41
The amount actually paid during the year was		$18,881,319 05

STATEMENT OF COLLECTING DIVISION.

This division has had charge of 25,580 accounts of postmasters who became late during the period from July 1, 1871, to June 30, 1874.

Amounts collected from postmasters becoming late prior to July 1, 1873.

Collected by draft		$236,256 [illegible]
Collected by suit		15,760 42
Credited on vouchers		55,774 20
Charged to suspense		145 91
Charged to bad debts		3,280 17
Charged to compromise debts		49,980 [illegible]
Total		361,127 [illegible]
Amounts due postmasters becoming late prior to July 1, 1873		$72,579 41
Amount paid thereon	$34,450 50	
Amount remaining due	34,259 48	
Amount closed by suspense	3,869 43	
		72,579 41
Amount collected by draft from contractors		$7,320 51
Number of changes of postmasters reported by appointment-office during the fiscal year was 9,137; and the balances due the United States upon the accounts of said late postmasters amount to		$399,360 34
Of which there has been collected by draft	$151,892 80	
Charged to suspense	215 88	
Charged to bad debts	20 06	
		152,128 74
Total remaining due		247,231 [illegible]
Of which there is in suit	$2,706 66	
Of which there is not in suit	244,524 84	
		247,231 [illegible]
Amount due postmasters late during the fiscal year		$62,233 77
Amount paid thereon		31,466 [illegible]
Amounts due by late postmasters for which suits were instituted during the fiscal year		230,311 24
Amount collected by suit during fiscal year		43,369 [illegible]

The subjoined tables, numbered from 1 to 57, inclusive, exhibit in detail the transactions of the Department for the fiscal year.

I have the honor to be, very respectfully,

J. J. MARTIN, *Auditor.*

Hon. MARSHALL JEWELL,
Postmaster-General.

No. 1.—*Statement exhibiting quarterly the receipts of the Post-Office Department under several heads during the fiscal year ended June 30, 1874.*

Receipts	Quarter ended September 30, 1873.	Quarter ended December 31, 1873.	Quarter ended March 31, 1874.	Quarter ended June 30, 1874.	Aggregate
Letter-postage	$76,187 48	$75,288 96	$89,260 88	$85,557 93	$326,295 [illegible]
Book, newspapers, and pamphlet postage	342,658 47	349,354 47	353,195 14	341,165 98	1,386,374 [illegible]
Box-rents and branch offices	316,702 03	308,497 40	302,422 40	299,304 02	1,226,925 [illegible]
Fines and penalties	2,363 10	1,793 15	4,169 41	2,385 46	10,711 [illegible]
Postage-stamps, stamped envelopes, and postal cards	6,355,160 46	5,291,396 02	5,752,501 07	5,989,664 65	23,388,722 [illegible]
Dead-letters	1,951 00	2,800 00	2,070 00	1,900 00	[illegible]
Revenue from money-order business				105,198 12	105,198 [illegible]
Miscellaneous	6,019 61	3,371 58	3,742 25	4,990 78	18,124 [illegible]
Total	7,101,042 15	6,032,501 58	6,507,361 1	6,830,166 94	26,471,07[illegible]

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 2.—*Statement exhibiting quarterly the expenditures of the Post-Office Department, under their several heads, for the fiscal year ended June* 30, 1874.

Expenditures.	Quarter ended September 30, 1873.	Quarter ended December 31, 1873.	Quarter ended March 31, 1874.	Quarter ended June 30, 1874.	Aggregate.
Compensation to postmasters	$1,456,328 72	$1,454,243 56	$1,449,252 11	$1,458,647 78	$5,818,472 17
Ship, steamboat, and way letters	1,280 79	1,143 49	701 01	1,063 13	4,188 42
Transportation of the mails	4,485,978 77	4,812,615 42	4,717,122 48	4,865,602 38	18,881,319 05
Wrapping-paper	6,450 00	6,450 00	1,825 00	5,475 00	20,200 00
Office-furniture	6,774 41	15,819 14	4,690 78	5,427 57	32,711 90
Advertising	57,418 49	12,857 22	9,613 81	29,851 16	109,740 68
Mail bags and catchers	63,269 80	49,871 91	49,503 51	50,069 54	212,714 76
Mail locks and keys	11,642 55	19,425 12	6,731 38	2,344 66	40,143 71
Mail depredations and special agents	40,407 49	38,290 21	53,278 11	33,502 82	165,478 63
Compensation of clerks for offices	795,909 12	818,535 80	824,197 83	859,319 02	3,297,961 77
Postage-stamps, stamped envelopes, and postal cards	260,075 59	141,568 36	200,112 03	243,440 10	845,196 08
Compensation of letter-carriers	436,746 40	455,915 51	455,693 35	454,063 42	1,802,418 68
Dead letters	550 88	.....	2,995 17	2,437 84	5,983 89
Postmarking and canceling stamps	1,919 18	2,165 82	1,994 69	1,873 85	7,953 54
Twine	13,728 00	10,547 50	6,006 50	19,292 50	49,574 50
Letter-balances	663 00	.....	2,336 90	1,750 00	4,749 90
Rent, light, and fuel	82,603 88	92,900 40	96,138 03	105,056 14	376,698 45
Balances due foreign countries	43,653 71	46,240 22	80,885 09	34,105 93	204,884 95
Miscellaneous	41,559 75	57,416 69	49,483 04	61,095 05	209,554 53
Miscellaneous, Stationery	9,581 10	9,799 45	8,961 76	8,126 66	36,468 97
Total	7,816,541 63	8,045,805 82	8,021,522 58	8,242,544 55	32,126,414 58

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

19 P M G

No. 3.—*Statement of the postal receipts and expenditures of*

States and Territories.	Letter-postage.	Book, newspaper, and pamphlet postage.	Waste paper and twine.	Box-rents and branch offices.	Postage-stamps, stamped envelopes, and postal cards.	Total receipts.
Maine	$3,919 21	$30,464 12	$82 96	$22,900 52	$352,344 8[illegible]	$409,711 [illegible]
New Hampshire	1,445 75	21,208 53	134 78	11,486 50	222,509 59	[illegible]
Vermont	1,244 69	20,588 12	56 44	8,843 90	209,870 87	240,604 [illegible]
Massachusetts	18,917 24	71,494 06	445 73	97,293 85	1,688,977 37	1,8[illegible]
Rhode Island	2,069 97	8,109 47	79 48	18,721 32	185,170 33	214,150 [illegible]
Connecticut	3,865 18	30,889 89	155 47	35,398 70	497,559 71	567,[illegible]
New York	122,333 96	202,159 19	1,486 35	180,666 29	4,561,917 49	5,068,[illegible]
New Jersey	6,293 54	29,676 15	156 76	24,427 13	468,429 88	5[illegible]
Pennsylvania	24,125 83	131,031 65	813 03	85,177 54	2,210,189 03	2,451,3[illegible]
Delaware	417 69	3,638 63	61 78	954 76	62,413 41	67,4[illegible]
Maryland	8,129 97	20,693 76	61 05	9,346 27	430,170 09	468,401 [illegible]
Virginia	1,897 81	24,518 06	52 55	11,913 29	338,133 74	376,515 [illegible]
West Virginia	669 23	10,348 41	12 20	3,731 54	116,124 91	130,[illegible]
North Carolina	847 56	14,196 91	12 65	6,488 61	156,875 02	178,4[illegible]
South Carolina	1,039 39	10,659 13	15 11	7,242 39	134,427 25	153,3[illegible]
Georgia	2,066 08	19,330 62	81 32	20,619 49	273,116 28	315,213 [illegible]
Florida	1,515 42	2,795 05	3 45	4,396 45	53,140 29	61,[illegible]
Ohio	9,817 96	108,667 90	914 79	73,106 94	1,468,251 97	1,660,[illegible]
Michigan	25,279 66	64,021 88	300 77	56,911 80	706,296 53	852,7[illegible]
Indiana	2,916 33	58,363 67	289 25	41,859 24	609,515 17	712,9[illegible]
Illinois	19,554 69	106,581 12	2,413 67	93,699 96	1,750,130 35	1,972,3[illegible]
Wisconsin	6,878 32	47,796 61	198 35	38,438 94	514,159 46	607,471 [illegible]
Iowa	4,873 42	58,610 14	194 12	49,246 82	590,495 78	703,4[illegible]
Missouri	5,872 75	50,945 13	289 17	32,497 02	786,995 15	876,5[illegible]
Kentucky	2,067 13	24,048 87	159 97	14,881 16	352,217 23	393,3[illegible]
Tennessee	1,550 76	19,647 94	150 89	10,822 11	271,843 02	304,014 [illegible]
Alabama	1,637 06	12,143 29	22 43	14,698 83	155,312 81	18[illegible]
Mississippi	732 71	12,466 55	19 80	13,587 99	139,714 92	166,[illegible]
Arkansas	504 67	68,092 42	40 85	7,545 97	86,970 20	101,9[illegible]
Louisiana	9,296 84	12,057 58	29 62	25,405 60	230,795 58	277,[illegible]
Texas	3,469 59	24,005 64	35 51	33,143 28	286,556 23	347,210 [illegible]
California	12,464 84	34,493 82	143 25	48,882 67	576,028 94	672,013 [illegible]
Oregon	171 40	6,170 00	6 49	7,797 49	55,783 36	69,9[illegible]
Minnesota	6,327 75	25,458 61	132 60	20,980 40	261,393 17	314,[illegible]
Kansas	1,380 81	21,636 55	32 25	26,196 42	265,104 70	314,3[illegible]
Nebraska	1,005 31	10,483 93	37 39	9,887 49	129,842 09	151,2[illegible]
Nevada	420 46	5,229 60	7 00	11,683 75	49,491 62	66,8[illegible]
Colorado	559 21	5,409 13	52 10	18,223 83	80,350 32	104,5[illegible]
Utah	455 12	4,340 97	21 50	5,887 25	46,974 29	57,6[illegible]
New Mexico	35 13	728 13	9 30	1,483 20	12,479 90	14,7[illegible]
Washington	110 28	2,275 63	1 25	2,000 95	16,685 10	21,0[illegible]
Dakota	268 28	1,390 82	....	1,209 25	18,847 34	21,71[illegible]
Arizona	37 39	499 24	....	614 50	7,800 80	[illegible]
Idaho	84 77	1,158 63	1 00	1,933 00	9,230 47	12,4[illegible]
Wyoming	103 29	1,130 98	60	2,145 70	19,516 31	2[illegible]
Montana	120 90	1,941 90	25	5,033 00	18,076 85	25,1[illegible]
Alaska	3 98	9 90	....	....	125 93	1[illegible]
District of Columbia	4,621 29	5,777 92	4 83	6,519 40	167,032 99	18[illegible]
	323,420 62	1,386,186 25	9,220 11	1,225,932 51	21,645,328 72	24,590,0[illegible]
Deduct miscellaneous items	....	....	....	....	....	....
Add miscellaneous items	2,874 63	187 81	....	993 34	1,743,393 48	1,747,4[illegible]
Total	326,295 25	1,386,374 06	9,220 11	1,226,925 85	23,388,722 20	26,3[illegible]

NOTE.—The following items of expenditure and revenue, being of a general nature, are not embra[illegible]

Amount paid for foreign mails and expenses of Government agents	$1,005,[illegible]
Balances due foreign countries	204,[illegible]
Ship, steamboat, and way letters	4,1[illegible]
Wrapping-paper	20,[illegible]
Twine	49,5[illegible]
Office-furniture	3,1[illegible]
Advertising	94,3[illegible]
Mail bags and catchers	140,[illegible]
Salaries and per diem of assistant superintendents of postal railway-service	56,[illegible]
Mail locks and keys	40,1[illegible]
Postmarking and canceling stamps	7,[illegible]
Mail-depredations and special-agents	163,[illegible]
Letter-balances	4,[illegible]
Expenses of postage-stamps, stamped envelopes, and postal cards	[illegible]
Dead-letters	3,[illegible]
Miscellaneous payments	107,[illegible]
Excess of expenditures brought down	3,041,[illegible]
	5,[illegible]

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

the United States for the fiscal year ended June 30, 1874.

Compensation of postmasters.	Clerks for offices, rent, light, and fuel, and incidental expenses of post-offices.	Compensation of letter-carriers.	Compensation of route-agents, postal-railway clerks, mail-messengers, and supply of special offices.	Transportation by States.	Total expenses.	Excess of expenditures over receipts.	Excess of receipts over expenditures.
$148,286 87	$46,988 99	$10,160 49	$39,954 81	$169,662 54	$415,053 70	$5,342 01	.....
102,155 68	16,783 11	6,100 00	19,595 23	70,711 64	215,345 66	.....	$41,439 49
106,022 05	14,472 64	.....	17,981 94	113,257 44	251,734 07	11,130 05	.....
319,445 99	323,046 64	154,434 71	155,753 26	307,668 91	1,260,349 51	.....	616,778 74
36,876 75	21,657 30	12,755 31	7,357 15	23,638 27	102,284 78	.....	111,865 79
156,811 65	64,953 11	18,495 16	41,789 58	96,008 22	378,057 72	.....	189,811 23
663,491 09	1,092,511 31	545,098 73	380,349 45	1,265,643 72	3,947,094 30	.....	1,121,468 98
157,120 32	41,445 07	49,030 94	26,610 89	207,203 19	481,410 41	.....	47,573 05
501,087 51	331,914 96	266,388 33	177,535 48	742,790 18	2,019,716 46	.....	431,620 62
19,906 38	8,325 94	9,018 49	7,882 93	22,912 82	68,046 56	560 29	.....
70,668 07	24,535 35	59,906 10	41,020 58	312,157 72	568,287 82	99,886 68	.....
120,503 03	49,792 62	17,448 85	41,014 87	394,355 34	623,114 71	246,599 26	.....
51,418 69	17,396 15	3,031 38	15,778 53	104,254 42	191,879 17	60,992 88	.....
70,199 36	15,651 23	.....	36,925 31	173,973 88	296,649 78	118,229 03	.....
45,648 58	12,947 88	5,116 96	16,640 82	149,996 31	230,390 55	77,007 28	.....
91,150 59	47,559 47	7,450 86	50,531 25	238,606 80	435,298 93	120,085 14	.....
23,709 30	5,587 53	.....	8,855 19	251,202 43	289,354 45	227,503 79	.....
400,397 48	198,870 96	108,854 58	193,072 49	1,066,728 49	1,967,924 00	307,164 44	.....
258,302 77	97,833 83	30,396 00	65,922 76	492,727 78	945,183 14	92,442 50	.....
245,499 90	103,623 69	29,709 12	94,967 63	398,128 54	861,928 88	148,985 22	.....
451,926 82	413,838 55	149,058 78	355,186 59	904,082 43	2,274,093 17	301,713 38	.....
196,168 08	55,757 87	21,907 30	70,000 85	354,088 53	697,922 63	90,450 95	.....
259,679 00	59,865 76	13,818 31	128,220 54	438,758 24	900,341 85	196,921 57	.....
197,644 61	148,727 43	102,802 86	134,757 41	705,878 54	1,289,810 85	413,211 63	.....
111,540 29	50,428 62	29,225 81	47,767 78	278,890 76	517,753 26	124,378 90	.....
88,013 33	51,094 54	18,305 10	71,413 08	229,055 93	457,881 98	153,867 26	.....
64,268 44	26,716 91	4,846 55	35,052 14	307,317 04	438,201 08	254,386 66	.....
76,744 57	13,118 98	.....	27,934 42	220,682 44	338,480 41	171,958 44	.....
44,639 05	12,485 69	.....	12,064 31	328,093 36	397,282 41	295,328 30	.....
37,600 44	63,347 51	37,964 27	18,989 21	281,682 84	439,584 27	161,999 05	.....
114,858 43	47,842 26	.....	31,185 81	678,177 76	872,064 26	524,854 01	.....
113,389 72	100,673 37	34,998 06	59,893 85	867,237 28	1,176,192 28	504,178 76	.....
26,200 27	10,090 44	.....	2,861 18	101,319 25	140,471 14	70,532 40	.....
102,929 14	34,990 52	10,272 23	54,397 89	295,121 33	497,711 11	183,418 58	.....
134,428 27	31,583 20	2,408 82	69,398 03	420,558 19	658,376 52	344,025 79	.....
47,695 54	18,516 12	3,834 69	72,700 49	415,351 64	558,098 48	406,842 27	.....
24,240 62	11,698 24	.....	1,946 95	193,564 77	231,450 58	164,618 15	.....
30,442 34	19,826 28	.....	8,694 73	196,801 54	255,764 89	151,170 30	.....
18,428 79	9,356 10	.....	1,436 58	374,034 10	403,255 57	345,576 44	.....
11,112 48	953 17	.....	1 36	325,817 48	337,884 49	323,148 83	.....
10,415 80	956 19	.....	605 50	182,147 47	194,124 96	173,051 75	.....
7,947 20	1,197 25	.....	428 57	38,756 11	48,339 13	26,623 44	.....
5,111 50	200 00	.....	6 00	95,885 03	101,202 53	92,250 60	.....
6,950 76	1,139 25	.....	77 00	122,089 00	130,256 01	117,848 14	.....
11,074 98	3,114 19	.....	109 70	12,424 09	26,722 96	3,826 08	.....
14,321 61	5,573 25	.....	100 00	123,771 82	143,766 68	118,593 78	.....
241 75	.....	.....	.....	.....	241 75	101 94	.....
6,961 00	117,842 25	34,033 78	101,159 02	.....	259,996 05	76,039 62	.....
,793,716 88	3,906,831 69	1,796,872 58	2,745,739 14	15,093,215 61	29,336,375 90	7,306,845 59	2,560,557 90
.....	.....	.....	.....	11,341 64	.....	.....	.....
24,755 29	23,235 96	5,546 10	.....	.....	42,195 71	42,195 71	1,747,449 26
818,472 17	3,930,067 65	1,802,418 68	2,745,739 14	15,081,873 97	29,378,571 61	7,349,041 30	4,308,007 16

the above statement, viz:

ceipts on account of dead-letters	$8,721 00
ceipts on account of fines and penalties	10,711 12
ceipts on account of miscellaneous	8,904 11
ceipts on account of money-order business	105,198 12
ess of transportation accrued	7,444 36
tal excess of expenditures over receipts	5,655,342 76

5,796,321 47

J. J. MARTIN, *Auditor.*

No. 4.—*Table exhibiting the receipts and expenditures of the Post-Office Department from July 1, 1836, to June 30, 1874.*

Year.	Receipts.			Expenditures.
	Revenue.	Treasury grants.	Total.	
1837	$4, 945, 668 21		$4, 945, 668 21	$3, 288, 319 [illegible]
1838	4, 238, 733 46		4, 238, 733 46	4, 430, 662 [illegible]
1839	4, 484, 656 70		4, 484, 656 70	4, 636, 536 [illegible]
1840	4, 543, 521 92		4, 543, 521 92	4, 718, 216 [illegible]
1841	4, 407, 726 27	$482, 657 00	4, 890, 383 27	4, 499, 5[illegible]
1842	4, 546, 849 65		4, 546, 849 65	5, 674, 751 [illegible]
1843	4, 296, 225 43		4, 296, 225 43	4, 374, 753 [illegible]
1844	4, 237, 287 83		4, 237, 287 83	4, 296, 31[illegible]
1845	4, 289, 841 80		4, 289, 841 80	4, 520, 731 [illegible]
1846	3, 487, 199 35	750, 000 00	4, 237, 199 35	4, 076, 03[illegible]
1847	3, 880, 309 23	12, 500 00	3, 892, 809 23	3, 979, 34[illegible]
1848	4, 555, 211 10	125, 000 00	4, 680, 211 10	4, 386, [illegible]
1849	4, 705, 176 28		4, 705, 176 28	4, 479, 06[illegible]
1850	5, 499, 984 86		5, 499, 984 86	5, 212, 953 [illegible]
1851	6, 410, 604 33		6, 410, 604 33	6, 27[illegible]
1852	5, 184, 526 84	1, 741, 444 44	6, 925, 971 28	7, 108, 45[illegible]
1853	5, 240, 724 70	2, 255, 000 00	7, 495, 724 70	7, 982, 75[illegible]
1854	6, 235, 586 22	2, 736, 748 96	8, 992, 335 18	8, 577, 42[illegible]
1855	6, 642, 136 13	3, 114, 542 26	9, 756, 678 39	9, 96[illegible]
1856	6, 920, 821 66	3, 748, 881 56	10, 669, 703 22	10, 405, 2[illegible]
1857	7, 353, 951 76	4, 528, 004 67	11, 881, 956 43	11, 508, 05[illegible]
1858	7, 486, 792 86	4, 679, 270 71	12, 166, 063 57	12, 72[illegible]
1859	7, 968, 484 07	3, 915, 946 49	11, 884, 430 56	11, 45[illegible]
1860	8, 518, 067 40	11, 154, 167 54	19, 672, 234 94	19, 170, 60[illegible]
1861	8, 349, 296 40	4, 639, 806 53	12, 989, 102 93	13, 606, 7[illegible]
1862	8, 299, 820 90	2, 598, 953 71	10, 898, 774 61	11, 125, 36[illegible]
1863	11, 163, 789 59	1, 007, 848 72	12, 171, 638 31	11, 314, 36[illegible]
1864	12, 438, 253 78	749, 980 00	13, 188, 233 78	12, 644, 7[illegible]
1865	14, 556, 158 70	3, 968 46	14, 560, 127 16	13, 694, 7[illegible]
1866	14, 386, 986 21		14, 386, 986 21	15, 332, 07[illegible]
1867	15, 237, 026 87	3, 991, 666 67	19, 228, 693 54	19, 215, 63[illegible]
1868	16, 292, 600 80	5, 696, 525 00	21, 969, 125 80	22, 730, 58[illegible]
1869	18, 344, 510 72	5, 707, 115 30	24, 051, 626 02	23, 698, 13[illegible]
1870	19, 772, 220 65	4, 022, 140 85	23, 794, 361 50	23, 998, 3[illegible]
1871	20, 037, 045 42	4, 126, 200 00	24, 163, 245 42	24, 396, 19[illegible]
1872	21, 915, 426 37	4, 993, 750 00	26, 909, 176 37	26, 65[illegible]
1873	22, 996, 741 57	5, 990, 475 00	28, 987, 216 57	29, 0[illegible]
1874	26, 471, 071 82	5, 922, 433 55	32, 393, 505 37	32, 126, 41[illegible]
Total	360, 361, 037 86	88, 695, 027 42	449, 056, 065 28	447, 154, 9[illegible]

J. J. MARTIN,
Auditor

OFFICE OF THE AUDITOR OF THE TREASURY,
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 5.—*Statement in detail of miscellaneous payments made by the Post-Office Department for the fiscal year ended June 30, 1874, exhibiting the sums placed to the credit of postmasters and others, and charged to miscellaneous account.*

Date.	To whom allowed.	For what object.	Amount.
1873.			
Oct. 4	J. S. Harris	Late postmaster, Kansas City, Mo., for miscellaneous items in the 2d quarter, 1873.	$[illegible]
14	J. E. Larkin	Late postmaster, Concord, N. H., for miscellaneous items in the 1st quarter, 1873.	1 [illegible]
22	T. C. Phillips	Postmaster, Bay City, Mich., for advertising arrival and departure of mails during the 2d quarter, 1873.	5 [illegible]
Nov. 22	Sayles J. Bowen	Late postmaster, Washington, D. C., for repairs, plumbing, and miscellaneous items in the 2d quarter, 1865.	5[illegible]
Dec. 5	W. P. Mangum	United States consul and postal agent, Nagasaki, Japan, for printing and mail-tags in the 4th quarter, 1872.	[illegible]
1874.			
Jan. 9	George H. Hawes	Postmaster, Sissiton agency, Dakota, for stage fare to Fort Wadsworth and return while taking charge of post-office property at that place during the 3d quarter, 1873.	5 [illegible]

No. 5.—*Statement of miscellaneous payments made by the Department, &c.*—Continued.

Date.	To whom allowed.	For what object.	Amount.
1874.			
Jan. 28	David Brown	Postmaster, Nebraska City, Nebr., for miscellaneous items in the 3d quarter, 1873.	$5 00
29	H. N. Parker	Postmaster, Whitehall, N. Y., for miscellaneous items in the 4th quarter, 1873.	1 00
Feb. 6	W. C. E. Thomas	Postmaster, Green Bay, Wis., for miscellaneous items in the 3d quarter, 1873.	15 00
10	N. P. Trist	Postmaster, Alexandria, Va., for a marble basin in the 4th quarter, 1873.	5 00
17	C. O. Shepard	United States consul and postal agent, Kanagawa, Japan, for miscellaneous items in the 3d quarter, 1873.	123 22
20	G. H. Keith	Postmaster, Minneapolis, Minn., for repairs in the 4th quarter, 1873.	299 81
Mar. 4	S. G. Trott	Late postmaster, Charleston, S. C., for expenses in fitting up the post-office at Charleston during 1866.	1,430 05
4	Henry Russell	Postmaster, Morristown, N. Y., for miscellaneous items in the 4th quarter, 1873.	1 20
4	George F. Seward	United States consul-general and postal agent, Shanghai, China, for miscellaneous items from July 1 to December 31, 1872, and from July 1 to December 31, 1873.	143 50
7	C. D. Hyler	Late postmaster, Fredericktown, Ohio, for hire of horse and carriage to take charge of and discontinue the post-office at, Lucerne, Ohio, February 25, 1873.	2 00
11	A. D. Downs	Late postmaster, Wyandotte, Kans., for expenses incurred in opening and transporting safe in the 4th quarter, 1872.	27 50
Apr. 4	S. P. Gambia	Postmaster, San Antonio, Tex., for miscellaneous items in the 1st, 2d, 3d, and 4th quarters, 1873.	180 92
June 1	John B. Campbell	Postmaster, Fort Scott, Kans., for miscellaneous items in the first quarter, 1874.	67 85
July 15	Louisa P. Molley	Postmaster, Potosi, Mo., for money stolen from a registered letter on the night of December 16, 1872, the amount being returned to the owner by postmaster on order of a special agent of the Post-Office Department.	125 00
15	W. T. Clark	Late postmaster, Galveston, Tex., for miscellaneous items in the 2d quarter, 1874.	54 07
23	J. L. Dunning	Late postmaster, Atlanta, Ga., for miscellaneous items in the 3d quarter, 1873.	6 25
Aug. 3	Oliver Wood	Late postmaster, Portsmouth, Ohio, for miscellaneous items in the 3d quarter, 1873.	9 50
25	C. H. Hopkins	Postmaster, Utica, N. Y., for directories in the 2d quarter, 1874.	16 00
Sept. 8	L. Colt	Postmaster, Suspension Bridge, N. Y., for miscellaneous items in the 4th quarter, 1873.	11 02
16	Seth Williams	Postmaster, Buckhannon, W. Va., for hire of a horse and buggy while taking charge of the post-office at Peck's Run.	3 50
26	C. O. Shepard	United States consul and postal agent, Kanagawa, Japan, for miscellaneous items in the 4th quarter, 1873, and 1st and 2d quarters, 1874.	579 47

No. 5.—*Amounts paid by the Department on warrants, and charged to miscellaneous account.*

Date.	To whom allowed.	For what object.	Amount.
1873.			
Oct. 2	George H. Reay	New York, N. Y., for official stamped envelopes furnished the Department during the quarter ended September 30, 1873.	$1,860 13
10	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistant draughtsmen to the topographer, for the half month ended October 15, 1873.	857 08
22	Jos. H. Blackfan	Washington, D. C., for services in connection with the proposed postal convention between the United States and France during the years 1872 and 1873.	300 00
28	J S. Botsford	United States district attorney, Jefferson City, Mo., for fees in sundry post-office cases.	50 00
29	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistant draughtsmen to the topographer, for the month ended October 31, 1873.	827 90

No. 5.—*Amounts paid by the Department on warrants, &c.*—Continued.

Date.	To whom allowed.	For what object.	Amount.
1873.			
Nov. 7	David McClelland	Washington, D. C., for engraving copper plates, and printing from copper sheets of post-route maps.	$1,311 6
13	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistants to the topographer, for the half month ended November 15, 1873.	9
24	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistant draughtsmen to the topographer, for the month ended November 30, 1873.	72
Dec. 2	A. P. Eastlake	Washington, D. C., for expenses incurred in visiting post-offices on business relating to the registered-letter system	131
	George H. Reay	New York, N. Y., for official-stamped envelopes delivered to postmasters during October and November, 1873.	2,49
6	C. F. Baldwin	Washington, D. C., for moiety of fine imposed by district court of Northern Ohio upon E. H. Gilbert for embezzling money-order funds.	27
9	A. Comstock	Brooklyn, N Y., for moiety of a fine imposed by the district court (United States) of Northern New York, upon E. J. Reynolds, convicted of mailing obscene matter.	67
18	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistants to the topographer, for the month of December, 1873.	1,54
27	The National Bank-Note Company.	New York, N. Y., for printing and numbering drafts and warrants.	40
1874.			
Jan. 2	George H. Reay	New York, N. Y., for official-stamped envelopes delivered to the Department during the month of December, 1873.	1,75
9	George F. Nesbitt	New York. N. Y., for post-office and registered-package envelopes furnished in the 4th quarter, 1873.	9,17
10	Kearney & Cunningham	Attorneys, Natchitoches, La., for fee in one post-office case.	10
10	James McPherson	Clerk United States court, Savannah, Ga., for fees in sundry post-office cases.	3
10	E. P. Johnson	United States attorney, Cheyenne, Wyo., for fee in case of United States *vs.* John O'Leary, late postmaster, Piedmont, Wyo.	10
10	H. Slack	United States marshal, Charleston, W. Va., for fees in two post-office cases.	6
15	G. D. Chenoweth	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended January 15, 1874.	66
24	The National Bank-Note Company.	New York, N. Y., for one million registered-package seals, furnished January 20, 1874.	1,50
26	William H. Smythe	United States marshal, Atlanta, Ga., for fees in sundry post-office cases.	15
28	Felix Brannigan	United States attorney, Jackson, Miss., for fees in three post-office cases.	3
29	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including the salaries of the assistant draughtsmen to the topographer, for the month of January, 1874.	1,54
Feb. 2	Isaac C. Mills	United States marshal, Little Rock, Ark., for fee in one post-office case.	3
2	J. H. Pierce	United States marshal, Oxford, Miss., for fees in three post-office cases.	6
2	G. R. Hill	Clerk United States district court, Oxford, Miss., for fees in eight post-office cases.	3
3	George H. Reay	New York, N. Y., for official-stamped envelopes furnished postmasters during the month of January, 1874.	3,36
11	G. D. Chenoweth	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended February 15, 1874.	67
18	Rufus I. Palen	Clerk United States court, Santa Fé, N. Mex., for fee in one post-office case.	1
20	The National Bank-Note Company.	New York, N. Y., for printing, numbering, paper, and binding impressions of drafts in ten books.	8
20	J. H. Bradley	Attorney at law, Boston, Mass., for fee in one case.	10
21	A. S. Gray	United States marshal, Harrisonburgh, Va., for fee in one post-office case.	3

No. 5.—*Amounts paid by the Department on warrants, &c.*—Continued.

Date.	To whom allowed.	For what object.	Amount.
1874.			
Feb. 25	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including the salaries of the assistants to the topographer, for the half month ended February 28, 1874.	$894 88
28	Ralph Wilcox	Clerk United States court, Portland, Oreg., for fees in one post-office case.	14 60
Mar. 4	C. I. Schofield	United States attorney, Kansas, for fees in seven cases against late postmasters.	65 60
4	George H. Reay	New York, N. Y., for official stamped envelopes delivered during the month of February, 1874.	1,320 59
11	G. D. Chenoweth	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended March 15, 1874.	670 00
23	J. R. Beckwith	United States attorney, New Orleans, La., for fee in one post-office case.	20 00
27	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including the salaries of the assistants to the topographer, for the month ended March 31, 1874.	921 01
28	J. E. Townsend	Clerk United States court, Jacksonville, Fla., for fees in two post-office cases.	20 55
28	James B. C. Drew	United States district attorney, Jacksonville, Fla., for fees in six post-office cases.	135 00
Apr. 2	George H. Reay	New York, N. Y., for official-stamped envelopes delivered during the month of March, 1874.	1,862 04
7	George F. Nesbitt & Co.	New York, N. Y., for post-office envelopes furnished the Department during the first quarter, 1874.	12,571 66
13	G. D. Chenoweth	Washington, D. C., for salaries of assistants to the topographer, for the half month ended April 15, 1874.	670 00
18	The National Bank-Note Company.	New York, N. Y., for printing, numbering, paper, and binding impressions of drafts in five books.	144 38
24	D. McClelland	Washington, D. C., for engraving copper plates, and printing from copper, sheets of post-route maps.	2,044 60
25	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistants to the topographer, for the month ended April 30, 1874.	1,098 77
May 4	George H. Reay	New York, N. Y., for official-stamped envelopes delivered during the month of April, 1874.	4,250 35
5	Rufus J. Palen	Santa Fé, N. Mex., for fees as clerk United States district court in two post-office cases.	13 20
7	The National Bank-Note Company.	New York, N. Y., for one million registered-package seals furnished during the month of April, 1874.	1,500 00
13	G. D. Chenoweth	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended May 15, 1874, and for incidental expenses incurred in the preparation and publication of post-route maps.	742 50
19	William G. Morris	Late United States marshal for California, for fees in seven post-office cases.	192 69
19	The National Bank-Note Company.	New York, N. Y., for printing, numbering, paper, and binding impressions of warrants in two books.	59 00
26	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including the salaries of assistants to the topographer, for the half month ended May 31, 1874.	759 18
June 3	George H. Reay	New York, N. Y., for official-stamped envelopes delivered during the month ended May 31, 1874.	2,049 64
12	George B. McCartee	Washington, D. C., for 500, 2, sub-drafts furnished the Department, February 11, 1874.	10 62
13	J. H. Pierce	United States marshal, Oxford, Miss., for fees in four post-office cases.	67 70
13	G. D. Chenoweth	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended June 15, 1874.	670 00
27	G. D. Chenoweth	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistants to the topographer, for the half month ended June 30, 1874.	698 16
29	D. McClelland	Washington, D. C., for engraving copper plates, and printing from copper, sheets of post-route maps.	336 50

No. 5.—*Amounts paid by the Department on warrants, &c.*—Continued.

Date.	To whom allowed.	For what object.	Amount.
1874.			
June 30	R. G. Usher	United States marshal, Boston, Mass., for fee in one post-office case.	[illegible]
30	G. D. Chenoweth	Washington, D. C., for expenses incurred in the preparation and publication of post-route maps.	[illegible]
July 3	George H. Reay	New York, N. Y., for official stamped envelopes delivered to postmasters during the month of June, 1874.	[illegible]
7	B. H. Bristow	Secretary of the Treasury, Washington, D. C., for labor and material supplied by the photographer of the Treasury Department in photographing postal maps, &c.	[illegible]
10	J. O. Glover	United States attorney, Chicago, Ill., in case of Edward Quinlan *vs.* F. A. Eastman, late postmaster, Chicago, Ill., and George W. Wood, late special agent Post-Office Department.	[illegible]
10	The National Bank-Note Company.	New York, N. Y., for one million registered-package seals furnished July 6, 1874.	[illegible]
10	George F. Nesbitt & Co	New York, N. Y., for registered-package envelopes furnished in June, 1874, as samples.	[illegible]
14	J. R. Beckwith	United States attorney, New Orleans, La., for fee in sundry post-office cases.	[illegible]
14	J. N. Kerns	United States marshal, Philadelphia, Pa., for fees in two cases against late postmasters.	[illegible]
14	George D. Chenoweth	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended July 15, 1874.	[illegible]
15	George F. Nesbitt & Co	New York, N. Y., for post-office, and registered-package envelopes furnished postmasters and the Department during the 2d quarter, 1874.	[illegible]
17	Felix Brannigan	United States attorney, Jackson, Miss., for fees in two post-office cases.	[illegible]
18	J. P. C. Emmons	Attorney at law, Jacksonville, Fla., for legal services in case of the United States *vs.* M. H. Alberger, arrested on the charge of robbing the post-office at Jacksonville, Fla.	[illegible]
22	George F. Nesbitt & Co	New York, N. Y., for post-office envelopes furnished postmasters and the Department June 30, 1874.	[illegible]
25	George Smith	United States marshal, Jefferson City, Mo., for fee in one post-office case.	[illegible]
25	William S. Tough	United States marshal, Leavenworth, Kans., for fees in eleven post-office cases.	[illegible]
28	George D. Chenoweth	Washington, D. C., for expenses incurred in the preparation and publication of post-route maps, including the salaries of assistants to the topographer, for the month ended June 30, 1874.	[illegible]
Aug. 3	George H. Reay	New York, N. Y., for official stamped envelopes delivered during the month ended July 31, 1874.	[illegible]
8	L. L. Lewis	United States attorney, Culpeper, Va., for fee in one post-office case.	[illegible]
8	D. T. Corbin	United States attorney, Charleston, S. C., for fee in one postal case.	[illegible]
8	G. R. Hill	Clerk United States court, Oxford, Miss., for fees in five post-office cases.	[illegible]
8	Isaac C. Mills	United States marshal, Little Rock, Ark., for fee in one post-office case.	[illegible]
12	A. C. Gibbs	Late United States attorney, Portland, Oreg., for fees in two post-office cases.	[illegible]
13	S. C. Parrish	Washington, D. C., for law-books for the use of the Post-Office Department.	[illegible]
14	G. D. Chenoweth	Washington, D. C., for salaries of assistants to the topographer, for the half month ended August 15, 1874.	[illegible]
19	Charles W. Preddy	Attorney at law, Little Rock, Ark., for legal services in sundry post-office cases.	[illegible]
19	Thomas G. Young	Late United States marshal for Oregon, for fees in two post-office cases.	[illegible]
19	R. J. Palen	Clerk United States court, Santa Fé, N. Mex., for fees in three post-office cases.	[illegible]
19	Ralph Wilcox	Clerk United States court, Portland, Oreg., for fee in one post-office case.	[illegible]
27	George D. Chenoweth	Washington, D. C., for expenses incurred in the preparation and publication of post-route maps, including the salaries of assistant draughtsmen to the topographer, for the half month ended August 31, 1874.	[illegible]
28	George H. Reay	New York, N. Y., for samples of registered-package envelopes furnished the Department.	[illegible]
Sept. 5	George H. Reay	New York, N. Y., for official stamped envelopes delivered during the month of August, 1874.	[illegible]

No. 5.—*Amounts paid by the Department on warrants, &c.*—Continued.

Date.	To whom allowed.	For what object.	Amount.
1874.			
Sept. 5	George B. McCartee	Washington, D. C., for engraving, printing, numbering, and binding post-office drafts and warrants.	214 62
10	J. W. Wells	United States attorney, Holly Springs, Miss., for fees in three post-office cases.	25 00
9	V. S. Lusk	United States attorney, North Carolina, for fees in three post-office cases.	60 00
15	G. D. Chenoweth	Washington, D.C., for salaries of assistant draughtsmen to the topographer, for the half month ended September 15, 1874.	740 00
16	H. W. Foote	Attorney at law, Macon, Miss., for legal services rendered in the cases of the United States *vs.* William McMorris and Richard Gray.	100 00
16	S. C. Parrish	Washington, D. C., for law-books furnished the Post-Office Department.	399 00
23	Fred. Beall	Attorney at law, Okolona, Miss., for services in the case of the United States *vs.* Wm. R. Rose, charged with taking letters from the West Point, Miss., post-office.	75 00
23	H. Slack	United States marshal, Charlestown, W. Va., for fee in one post-office case.	22 00
30	George D. Chenoweth	Washington, D. C., for incidental expenses incurred in the publication and preparation of post-route maps, including the salaries of assistant draughtsmen to the topographer, for the month of September, 1874.	1,775 52

No. 5.—*Amounts paid by the Department on drafts and charged to miscellaneous account.*

1873.			
Oct. 8	S. S. Marble	United States marshal, Portland, Me., for fee in one post-office case.	$14 11
Nov. 13	G. W. Wells	United States attorney, Holly Springs, Miss., for fees in two post-office cases.	40 00
13	A. Armstrong	Late United States marshal, Saint Paul, Minn., for fees in two post-office cases.	34 50
13	A. P. Eastlake	Washington, D. C., for amount advanced to pay expenses in examining the registered-letter operations of various offices.	75 00
17	Charles S. Hamilton	United States marshal, Milwaukee, Wis., for fees in sundry post-office cases.	16 20
Dec. 19	A. E. Buck	Clerk United States circuit court, Atlanta, Ga., for fees in sundry post-office cases.	57 25
1874.			
Jan. 7	H. P. Farrow	United States attorney, Georgia, for fees in two post-office cases.	40 00
10	John B. Furay	Omaha, Nebr., for fee advanced by him to pay Pendleton and Baily, attorneys, in case of United States *vs.* D. W. Allison, charged with robbing United States mail.	20 00
10	William Pound	United States attorney, Dakota, for fee in one post-office case.	10 00
Feb. 2	H. H. Wells, jr	United States attorney, Richmond, Va., for fee in one case.	5 00
18	L. H. Miller	Baltimore, Md., for safe for dead-letter office, delivered February 16, 1874.	337 50
21	A. S. Thomas	Clerk United States court, Topeka, Kans., for fees in twenty-one post-office cases.	224 80
Mar. 7	Sherman Conant	United States marshal, Jacksonville, Fla., for fees in four post-office cases.	32 02
11	A. P. Eastlake	Washington, D. C., for amount advanced to pay expenses incurred in attending to registered-letter business.	50 00
21	G. W. Wood	Quincy, Ill., for services and expenses in case of Baum *vs.* Eastman, postmaster, and Wood, special agent, growing out of occupation of Burlington Hall for a post-office.	100 00
21	G. W. Wood	Quincy, Ill., for services and expenses in case of Quinlan *vs.* Eastman, postmaster, and Wood, special agent, growing out of occupation of store-room under Burlington Hall for a post-office.	100 00
28	N. J. Riddick	Clerk United States circuit court, Raleigh, N. C., for fees in five post-office cases.	58 50
Apr. 4	H. S. Burnell	Attorney at law, Little Rock, Ark., for services rendered in examination of witnesses in case of United States *vs.* James Morgan and John Miller, charged with robbing United States mail.	50 00
4	R. C. Badger	United States attorney, Raleigh, N. C., for fees in four post-office cases.	80 00
11	William Daily	United States marshal, Omaha, Nebraska, for fee in one post-office case.	18 56
25	J. M. Tomeny	Late United States marshal, Memphis, Tenn., for fees in sundry post-office cases.	88 74

Amounts paid by the Department on drafts, &c.—Continued.

Date.	To whom allowed.	For what object.	Amount.
1874.			
May 28	A. P. Eastlake	Washington, D. C., for expenses incurred in visiting New York City on business connected with the issue of registered-package envelopes.	$50 00
June 3	A. P. Eastlake	Washington, D. C., for expenses incurred in visiting various offices to examine into the registered-letter system.	56 5[illegible]
5	Wheeler & Marshall	Attorneys, Chattanooga, Tenn., for services in one post-office case.	25 00
5	Peter Melendy	United States marshal, Cedar Falls, Iowa, for fees in two post-office cases.	20 [illegible]
9	A. E. Buck	Clerk United States court, Atlanta, Ga., for fees in four post-office cases	60 [illegible]
9	E. R. Campbell	Clerk United States court, Nashville, Tenn., for fee in one post-office case.	11 [illegible]
9	N. W. Trimble	Clerk United States court, Mobile, Ala., for fees in two post-office cases.	3[illegible] 55
10	M. Hopkins	Clerk United States court, Austin, Tex., for fees in sundry post-office cases.	116 [illegible]
10	A. M. Hughes	United States district attorney, Nashville, Tenn., for fee in one post-office case.	20 [illegible]
July 9	Sherman Conant	United States marshal, Jacksonville, Fla., for fee in one post-office case.	15 [illegible]
15	Church Howe	Late United States marshal, Wyoming Territory, for fee in one post-office case.	26 66
18	Nathan Trusler	United States attorney, Indianapolis, Ind., for fee in one post-office case.	10 [illegible]
18	C. B. Gould	Special agent, Post-Office Department, Emporium, Pa., for amount paid by him to an attorney, for fee in one post-office case.	10 [illegible]
18	E. W. Early	Clerk United States circuit court, Lynchburgh, Va., for fees in three post-office cases.	13 [illegible]
31	Israel McDanolds	Special agent, Post-Office Department, Elmira, N. Y., for moiety of fine in the case of the United States *vs.* John S. Pardee.	512 [illegible]
Aug. 4	A. P. Eastlake	Washington, D. C., for amount advanced to pay expenses in attending to business connected with the manufacture of registered-package envelopes.	75 [illegible]
5	George R. Peck	United States attorney, Topeka, Kans., for fees in seven post-office cases.	14. [illegible]
7	W. W. Murray	United States attorney, Memphis, Tenn., for fees two post-office cases.	4. [illegible]
7	E. R. Hampton	Clerk United States court, Asheville, N. C., for fees in six post-office cases.	53 [illegible]
25	W. H. Smythe	United States marshal, Atlanta, Ga., for fees in three post-office cases.	131 [illegible]
27	H. C. Alleman	United States attorney, Denver, Col., for commissions and expenses incurred in the collection of $1,188.52 from L. C. Rockwell, late United States attorney, being money received by said Rockwell in case of United States *vs.* A. Sagendorf, late postmaster, Denver, Col.	202 [illegible]
28	A. P. Eastlake	Washington, D. C., for amount advanced to pay expenses while on business connected with the manufacture of registered-package envelopes.	50 [illegible]

Amounts allowed to the postmasters at the principal offices of the United States for incidental expenses of such offices actually and necessarily incurred, such as office-repairs, gas-fixtures, telegraphing, and other miscellaneous expenses.

Third quarter, 1873	$[illegible]
Fourth quarter, 1873	[illegible]
First quarter, 1874	[illegible]
Second quarter, 1874	[illegible]
Total	[illegible]
Amount paid to postmasters and others	[illegible]
Amount paid by warrants	[illegible]
Amount paid by drafts	[illegible]
Total	[illegible]
Amount allowed for stationery	[illegible]
Total	[illegible]
Deduct amounts charged to postmasters for over-credits	[illegible]
Amount actually paid and charged to miscellaneous account	[illegible]

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 6.—*Statement showing the transactions of the Money-Order Office of the United States for the fiscal year ended June 30, 1874.*

States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue.		Drafts and deposits received.	Balance due postmasters.	Transferred from—			
				Total fees received.	Premiums.			Postage fund.	Swiss fund.	British fund.	German fund.
Alabama	57,179	$17,584 48	$1,183,384 83	$6,997 25	$335 05	$556,348 03	.....	$2,181 33	$72 00	$1,683 00	$5,242 00
Arizona Territory	3,762	13,185 43	139,606 95	728 40	.....	.....	.....	274 00	.....	1,094 50	303 00
Arkansas	48,200	27,394 83	1,299,998 63	7,203 10	.....	563,061 00	.....	765 00	.....	3,212 53	2,108 23
California	62,397	14,570 28	1,527,666 50	8,645 60	.....	1,212,421 00	$278 56	9,395 39	1,624 61	36,304 55	38,295 25
Colorado Territory	28,152	21,248 36	612,712 76	3,530 95	.....	383,194 00	.....	6,572 00	164 00	31,981 42	1,421 00
Connecticut	73,994	8,983 95	1,111,562 22	7,087 85	.....	468,239 00	47 62	20,991 29	520 00	41,739 05	7,285 00
Dakota Territory	6,081	893 16	110,132 82	668 75	.....	1,950 00	.....	338 00	.....	182 00	258 00
Delaware	11,690	2,598 62	175,391 05	1,117 95	.....	7,510 00	35 06	4,110 00	35 00	3,189 29	540 00
District of Columbia	31,957	12,035 98	633,603 61	3,648 80	.....	1,406,782 87	.....	.....	698 00	11,256 00	6,930 00
Florida	32,247	28,264 78	888,277 90	4,888 80	.....	172,614 00	.....	.....	5 00	5,794 50	1,814 75
Georgia	65,334	51,399 71	1,141,924 90	7,025 40	3 50	977,979 75	63 26	6,327 14	37	6,962 80	5,878 41
Idaho Territory	5,194	6,989 41	180,132 87	959 10	.....	1,004 00	37 54	.....	.....	8,904 00	466 93
Illinois	485,305	81,119 67	6,987,120 24	45,428 80	.....	6,935,322 00	294 22	44,752 61	5,254 72	75,107 77	32,027 89
Indiana	235,880	45,029 67	3,374,422 76	21,970 75	.....	1,142,770 10	145 09	17,385 09	829 44	26,538 62	11,449 58
Indian Territory	742	.....	17,509 75	99 35	.....	.....	.....	.....	.....	.....	.....
Iowa	289,735	46,057 75	4,282,577 10	27,909 45	.....	1,491,192 00	218 74	18,499 12	1,353 00	10,316 57	10,327 92
Kansas	117,109	25,662 79	2,075,558 58	12,845 70	.....	647,071 78	69 59	6,382 22	175 00	3,307 93	1,832 40
Kentucky	79,635	12,011 03	1,251,716 98	7,956 60	.....	1,013,679 00	36 09	6,516 00	889 00	5,882 97	5,012 68
Louisiana	41,211	29,956 96	1,062,480 06	5,987 50	.....	1,443,146 44	18 69	3,945 00	518 00	6,662 00	1,650 25
Maine	69,831	22,858 92	1,301,348 39	7,827 70	.....	591,518 00	44 16	8,153 58	152 00	109,172 45	3,814 75
Maryland	55,187	10,358 01	952,497 19	5,844 65	.....	1,214,113 00	.....	4,600 44	947 00	9,998 45	22,247 42
Massachusetts	158,213	37,913 24	2,762,027 83	16,849 55	15 82	1,888,994 88	25 22	36,774 60	1,530 00	177,244 57	21,321 00
Michigan	233,703	53,774 75	3,663,392 93	23,047 00	.....	1,780,877 27	139 47	26,393 97	852 25	52,961 80	14,963 37
Minnesota	107,849	23,696 29	1,749,725 31	10,996 55	.....	669,199 12	69 48	3,698 33	354 00	5,939 61	5,640 58
Mississippi	77,634	15,198 34	1,696,898 15	9,918 85	.....	4,200 00	109 74	1,381 27	8 21	2,055 44	829 01
Missouri	187,700	34,776 86	3,118,142 04	19,426 40	.....	3,661,217 13	555 46	14,704 37	1,847 00	30,843 15	6,082 04
Montana Territory	6,941	4,245 74	153,855 00	889 95	.....	.....	.....	691 59	.....	1,531 60	2,184 78
Nebraska	53,732	16,303 87	954,610 47	5,849 10	.....	1,092,816 00	137 37	11,918 39	.....	3,269 27	2,235 76
Nevada	9,130	3,090 56	266,712 72	1,450 15	.....	140 00	.....	234 00	337 00	7,855 48	4,523 00
New Hampshire	48,823	6,013 07	751,253 03	4,794 75	.....	85,775 00	168 12	5,884 41	102 00	22,978 02	1,635 32
New Jersey	57,559	8,005 34	956,062 71	5,898 55	.....	152,725 00	111 77	28,925 84	2,097 00	52,790 06	12,392 80
New Mexico Territory	4,439	1,896 26	128,996 44	704 25	.....	225 00	.....	274 00	.....	390 00	390 00
New York	350,417	236,063 48	5,467,595 36	34,384 25	.....	16,631,278 84	269 81	134,332 40	36,474 46	257,195 25	148,824 70
North Carolina	62,827	13,541 15	1,301,703 66	7,704 30	36 00	173,190 00	12 36	1,533 93	10 00	1,620 00	7,086 00
Ohio	354,886	54,264 13	5,042,410 67	32,889 00	.....	3,343,372 12	590 61	54,104 71	3,341 00	89,843 02	39,631 68
Oregon	17,665	9,723 47	395,005 84	2,300 25	.....	280,400 00	8 49	2,349 64	498 00	5,179 70	4,464 50
Pennsylvania	257,380	44,339 13	3,942,527 00	25,001 30	.....	2,913,930 12	542 89	50,570 06	3,395 00	121,409 36	28,784 00
Rhode Island	22,952	2,919 20	387,235 56	2,376 80	.....	121,098 00	.....	2,009 00	65 00	35,651 73	3,126 00

No. 6.—*Statement showing the transactions of the Money-Order Office of the United States, &c.*—Continued.

States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue.		Drafts and deposits received.	Balance due postmasters.	Transferred from—			
				Total fees received.	Premiums.			Postage fund.	Swiss fund.	British fund.	German fund.
South Carolina	43,843	$9,507 20	$854,754 18	$5,147 90	.....	$506,820 00	.....	$1,280 93	.....	$7,637 00	$681 00
Tennessee	96,154	36,269 36	1,961,273 99	11,574 10	.....	2,104,826 50	$63 15	15,865 94	$2,064 69	7,373 00	2,380 00
Texas	67,354	43,179 66	1,578,106 03	9,001 25	$112 80	789,403 02	344 72	17,644 92	246 00	7,580 88	9,779 61
Utah Territory	10,496	3,288 81	299,859 13	1,633 60	.....	750 00	.....	1,954 00	1,521 00	10,010 14	1,296 75
Vermont	51,133	7,777 65	762,650 62	4,925 40	.....	102,550 00	90 15	7,993 16	.....	7,542 18	14 00
Virginia	71,739	20,928 25	1,299,991 85	7,900 30	353 07	1,314,194 04	47 64	8,307 61	554 00	14,315 85	6,847 43
Washington Territory	6,715	1,772 09	187,229 40	1,030 00	.....	8,368 00	.....	716 00	.....	1,638 00	717 00
West Virginia	31,777	6,090 88	507,199 15	3,150 80	.....	56,865 00	20 35	5,238 00	129 00	3,290 67	2,444 00
Wisconsin	221,958	56,522 68	3,753,953 25	23,302 95	.....	2,374,591 43	217 03	14,918 98	1,953 83	22,094 19	18,465 50
Wyoming Territory	6,601	2,719 08	152,066 30	862 55	.....	.....	.....	.....	.....	904 00	308 00
Total	4,420,633	1,231,887 33	74,424,854 71	461,382 30	856 24	60,287,722 44	4,812 45	610,888 76	70,616 57	1,350,373 83	505,953 29

No. 6.—*Statement showing the transactions of the Money-Order Office of the United States, &c.*— Continued.

States and Territories.	Number of orders paid.	Amount of orders paid.	Amount of orders repaid.	Transferred to—				Deposits.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
				Postage fund.	Swiss fund.	British fund.	German fund.					
Alabama	24,299	$522,867 10	$5,458 27	$2,010 17	.....	$492 45	$450 05	$1,220,303 90	$918 63	$4,018 13	$17,309 27	.....
Arizona Territory	587	22,760 08	665 00	.....	.....	82 69	111 00	120,178 08	5 00	299 67	11,090 76	.....
Arkansas	18,960	565,806 11	8,050 15	66,925 00	.....	121 00	137 29	1,240,440 70	1,456 89	3,353 44	17,411 70	$31 04
California	35,469	1,173,053 98	11,297 52	488 22	$91 00	2,361 14	2,912 30	1,629,600 00	94 90	8,501 22	20,753 12	48 34
Colorado Territory	16,590	457,315 77	5,649 32	.....	28 00	176 00	876 00	579,805 00	252 48	2,263 26	14,426 07	32 59
Connecticut	66,193	1,104,195 30	6,850 34	370 74	335 25	1,794 04	4,216 38	533,878 31	33 31	4,643 14	10,139 17	.....
Dakota Territory	1,817	43,793 64	1,076 11	.....	.....	153 00	1,354 00	66,122 00	2 10	332 30	1,519 58	.....
Delaware	7,792	132,107 06	1,020 85	.....	.....	143 19	109 52	58,705 88	1 50	702 74	1,733 36	2 87
District of Columbia	40,822	737,519 87	4,678 19	.....	.....	121 00	475 00	1,314,577 79	4,519 05	4,580 32	8,484 04	.....
Florida	10,071	272,708 48	4,072 32	.....	.....	297 89	150 50	793,530 96	100 31	2,311 18	28,488 03	.....
Georgia	48,519	935,888 04	7,517 55	2,500 00	64 08	674 60	387 67	1,190,904 30	212 97	4,305 99	55,085 76	24 98
Idaho Territory	710	25,782 69	356 45	87,647 00	.....	.....	379 11	76,618 00	5 62	384 10	7,320 88	.....
Illinois	645,937	8,545,906 52	45,468 77	6,136 19	1,559 22	7,786 89	38,114 26	5,439,823 23	4,09 84	26,743 63	90,635 36	156 01
Indiana	127,060	2,145,661 57	21,441 04	676 72	958 00	2,292 77	10,680 50	2,401,893 55	591 77	11,648 79	44,627 91	68 48
Indian Territory	77	1,759 18	13 50	.....	.....	.....	.....	15,729 45	.....	37 52	69 45	.....
Iowa	175,624	3,042,752 23	25,400 39	3,537 00	624 00	4,149 73	21,557 81	2,717,773 00	74 70	15,436 85	57,074 59	71 35
Kansas	82,541	1,809,139 76	12,542 49	.....	164 19	6,093 17	6,138 33	900,265 54	83 75	8,526 56	29,808 01	144 19
Kentucky	81,336	1,605,514 16	8,396 77	135 00	59 00	1,227 98	2,976 73	664,614 00	158 10	5,037 36	15,514 21	67 04
Louisiana	45,340	1,270,323 00	5,366 70	3,700 00	452 00	2,294 00	4,833 00	1,226,185 45	11,402 62	4,100 33	45,689 17	18 63
Maine	53,311	1,073,502 92	5,646 10	25 00	.....	1,592 08	187 22	938,608 00	87 18	5,020 79	20,144 72	75 88
Maryland	85,778	1,864,438 53	6,096 96	.....	15 00	385 56	778 47	330,558 00	296 79	6,892 02	11,098 70	46 13
Massachusetts	267,810	3,786,107 59	16,519 99	699 00	385 61	4,828 01	1,409 52	1,076,277 75	256 36	17,137 08	38,850 54	225 26
Michigan	159,239	2,823,774 83	24,029 34	950 76	564 33	5,750 58	14,105 61	2,678,076 30	30 15	13,617 11	55,384 99	118 81
Minnesota	57,699	1,145,410 79	11,383 81	635 00	173 10	3,063 90	24,725 16	1,250,189 00	10 12	5,990 79	27,735 11	2 99
Mississippi	18,984	381,854 40	9,958 17	346 65	.....	359 93	521 56	1,299,219 53	857 55	3,942 18	33,539 04	.....
Missouri	249,010	5,010,271 55	23,985 55	1,064 00	1,543 00	2,190 72	14,353 96	1,760,686 85	391 35	17,493 17	55,543 55	70 75
Montana Territory	2,055	63,640 62	796 95	.....	.....	32 96	209 12	93,299 00	27 42	487 02	4,904 97	.....
Nebraska	31,743	711,816 86	6,788 47	886 00	655 00	1,658 51	10,197 56	1,328,273 00	21 62	4,139 60	22,674 73	28 88
Nevada	1,380	46,458 32	2,295 18	.....	.....	45 08	429 52	229,465 00	5 00	368 81	5,276 00	.....
New Hampshire	34,327	591,832 54	3,704 70	106 00	.....	888 40	44 00	271,001 10	51 28	3,077 58	7,870 80	27 38
New Jersey	52,454	910,724 92	6,993 87	1,727 00	1,050 00	3,083 36	13,848 77	267,534 00	436 20	3,868 91	9,273 19	468 85
New Mexico Territory	730	23,805 70	154 00	.....	.....	52 00	223 00	105,467 00	1 00	294 21	2,879 04	.....
New York	838,021	11,276,861 12	44,946 10	300,739 57	92,469 26	1,451,374 79	203,601 39	9,344,027 50	2,251 78	45,723 43	183,998 63	425 00
North Carolina	25,965	526,558 17	6,174 45	6,668 00	.....	1,185 00	286 00	943,126 83	13 00	3,883 73	18,510 23	11 99
Ohio	377,953	5,886,556 58	31,991 81	21,696 57	2,262 44	7,034 58	13,056 67	2,627,012 62	1,885 34	19,990 92	48,211 09	688 32
Oregon	6,483	214,582 08	2,589 06	.....	.....	65 03	373 10	464,591 00	28 12	1,483 32	16,212 81	5 37
Pennsylvania	316,345	4,662,913 35	26,874 33	3,298 00	824 99	11,714 33	19,525 22	2,331,335 24	3,019 68	19,568 14	51,144 84	280 74
Rhode Island	15,526	305,430 99	2,252 73	.....	44 00	678 00	179 00	241,601 00	.....	1,425 27	2,870 30	.....

No. 6.—*Statement showing the transactions of the Money-Order Office of the United States, &c.*—Continued.

States and Territories.	Number of orders paid.	Amount of orders paid.	Amount of orders repaid.	Transferred to—				Deposits.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
				Postage fund.	Swiss fund.	British fund.	German fund.					
South Carolina	24,466	$479,230 76	$3,981 55	.....	$43 49	$212 00	$575 09	$881,546 19	$9 70	$2,543 98	$17,674 56	$10 98
Tennessee	74,262	1,567,911 16	10,955 80	$15,065 00	336 60	1,007 00	2,222 00	2,489,738 18	945 35	7,136 92	46,355 19	17 53
Texas	28,695	758,537 32	10,835 07	1,714 56	1,011 51	2,122 59	5,954 48	1,606,839 14	106 24	4,813 96	63,404 02	.....
Utah Territory	5,025	135,550 10	937 35	.....	.....	643 27	791 09	177,044 00	101 70	724 27	4,499 55	92 10
Vermont	32,515	570,252 24	3,074 40	106 00	.....	377 92	121 13	306,355 18	13 00	3,067 03	10,125 60	50 66
Virginia	60,969	1,190,106 73	7,202 45	105 70	38 00	1,549 01	1,731 88	1,448,200 43	239 75	5,015 05	19,251 04	.....
Washington Territory	2,605	95,460 23	1,132 38	.....	.....	47 63	640 84	100,689 00	5 00	581 98	2,909 10	4 33
West Virginia	14,765	278,382 60	2,416 03	.....	164 00	176 60	866 08	295,287 00	32 55	1,429 70	5,673 29	.....
Wisconsin	147,310	2,909,440 57	23,840 00	1,261 15	2,737 41	5,385 75	38,504 92	3,209,368 43	123 61	14,482 67	60,654 17	221 15
Wyoming Territory	1,223	30,166 90	842 85	.....	.....	73 85	366 00	122,365 00	.....	362 89	2,682 44	.....
Total	4,416,114	73,736,435 01	473,721 24	531,240 00	108,652 48	1,537,839 98	465,687 78	60,408,730 41	35,251 36	321,789 06	1,326,532 68	3,467 92

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

No. 7.—*Statement of the receipts and disbursements of the Money-Order Office for the fiscal year ended June 30, 1874.*

RECEIPTS.

Balance in hands of postmasters June 30, 1873	$1,231,887 33
Amount received for money-orders issued	74,424,854 71
Amount received for fees	461,382 30
Amount received for premiums	856 24
Amount received for deposits and drafts	60,287,722 44
Amount due postmasters	4,812 45
Amount transferred from postage fund	610,888 76
Amount transferred from Swiss fund	70,616 57
Amount transferred from British fund	1,350,373 83
Amount transferred from German fund	505,953 29
	138,949,347 92

DISBURSEMENTS.

Amount of money-orders paid	$73,736,435 01	
Amount of money-orders repaid	473,721 24	
Amount transferred to postage fund	531,240 00	
Amount transferred to Swiss fund	108,652 48	
Amount transferred to British fund	1,537,839 98	
Amount transferred to German fund	465,687 78	
Amount deposited at first-class offices	60,408,730 41	
Amount paid for incidental expenses	35,251 36	
Amount paid for clerk-hire and commissions	321,789 06	
Miscellaneous items	3,467 92	
Balance in hands of postmasters June 30, 1874	1,326,532 68	
		138,949,347 92

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

No. 8.—*Statement showing the revenue which accrued on money-order transactions for the fiscal year ended June 30, 1874.*

Total amount of fees received		$461,382 30
Total amount of premiums, &c		856 24
		462,238 54
Commissions and clerk-hire	$321,789 06	
Lost remittances	1,932 00	
Defalcation of late postmaster at Egg Harbor City, N. J	429 95	
Defalcation of late postmaster at New Orleans, La	10,108 37	
Incidental expenses	22,781 04	
Net revenue	105,198 12	
		462,238 54

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

No. 9.—*Statement showing the transactions of the Money-Order Office of the United States with Switzerland for the fiscal year ended June 30, 1874.*

States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue. Total fees received.	Transferred from domestic money-order fund.	Balance due postmasters.	Number of orders paid.	Amount of orders paid.	Amount of orders re paid.	Transferred to domestic money-order fund.	Amount paid Switzerland.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
Alabama	3	$1 58	$71 00	$2 25						$72 00			$0 08	$2 75	
Arkansas															
California	62	1 97	1,606 58	46 25	$91 00		5	$112 47	$3 25	1,624 61			93	4 54	
Colorado Territory	6	25	160 00	4 25	28 00		1	28 33		164 00				17	
Connecticut	24	06	670 35	18 50	335 25		20	502 37		520 00				1 79	
Delaware	2		35 00	1 00						35 00			09	77	$0 14
District of Columbia	32	08	695 04	19 50			2	16 43		698 00				19	
Florida	1	56 32	5 00	25						5 00			01	56 56	
Georgia		87			64 08		3	64 08		37				50	
Idaho Territory		97												97	
Illinois	253	1 74	5,803 43	163 50	1,559 22	$0 70	85	2,219 17	50 00	5,254 72			1 85	2 85	
Indiana	42	97 09	718 50	21 50	958 00		38	959 35	6 75	829 44			90	5 40	
Iowa	62	2 33	1,385 45	40 00	624 00	08	25	688 81		1,353 00			1 70	1 60	
Kansas	5	32 14	140 00	3 75	164 19	22	7	163 52		175 00			22	1 26	30
Kentucky	32	5 12	872 50	23 75	59 00		4	70 71		889 00				66	
Louisiana	23	87	554 50	14 50	452 00		14	502 52		518 00			40	95	
Maine	2	50 00	100 00	2 50						152 00			25	25	
Maryland	27	76	922 65	24 25	15 00		1	15 12		947 00				54	
Massachusetts	56	6 26	1,485 86	41 00	385 61		16	387 27		1,530 00				1 46	
Michigan	53	3 67	866 90	26 75	564 33		21	594 97		852 25				14 43	
Minnesota	12	43	345 00	9 25	173 10	21	6	172 13		354 00			94	82	10
Mississippi	1		8 00	25		02				8 21			02		04
Missouri	76	2 02	1,955 25	53 75	1,543 00		59	1,689 84		1,847 00			1 41	15 75	02
Montana Territory															
Nebraska		18			655 00		21	654 77						41	
Nevada	12	06	327 70	9 50						337 00				26	
New Hampshire	2	07	100 00	2 50						102 00			25	32	
New Jersey	78	2 92	2,149 00	58 25	1,050 00		42	1,069 25	90 00	2,097 00			2 73	1 19	
New York	1,363	61 31	37,906 03	1,056 50	92,469 26	30	178	4,280 46	267 43	36,474 46	$80,870 92	$4 50	601 07	5 58	
North Carolina	1	1 11	10 00	25						10 00			02	1 34	
Ohio	197	69 05	3,373 31	91 50	2,262 44		79	2,448 10		3,341 00			1 29	5 80	
Oregon	14	58	484 95	13 00						498 00				53	
Pennsylvania	191	56 86	3,738 00	100 25	894 99		58	1,330 10		3,395 00			1 48	4 55	
Rhode Island	9	27	83 55	2 75	44 00		3	65 26		65 00				31	
South Carolina					43 49	11	1	43 40					11		
Tennessee	70	95 07	1,074 [illegible]	54 95	390 00	17	15	303 03		2,004 60			1 00	1 [illegible]	31
Texas	[illegible]	40	975 40	7 95	1,011 51		27	1,047 50		940 00				1 00	

Utah Territory	42	68	1,182 75	38 50						1,521 00				93	
Vermont		17												17	
Virginia	20	1 64	540 65	15 25	38 00		2	38 01		554 00			37	2 99	14
West Virginia	8	1 30	125 25	3 50	164 00		5	163 96		129 00			01	1 08	
Wisconsin	65	1 16	1,294 80	36 50	2,737 41	98	55	1,502 96		1,953 82		5 20	5 00	603 24	63
Wyoming Territory															
Total	2,721	557 42	72,287 28	2,006 50	108,652 48	2 79	793	21,222 16	417 43	70,616 57	80,870 92	9 70	622 12	745 89	1 68

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

20 P M G

No. 10.— *Statement of receipts and disbursements of the Money-Order Office with Switzerland for the fiscal year ended June 30, 1874.*

RECEIPTS.

Balance in hands of postmasters June 30, 1873	$557 42
Amount received for money-orders issued	72,287 29
Amount received for fees	2,006 50
Amount received from domestic fund	108,652 48
Amount due postmasters	2 79
	183,506 47

DISBURSEMENTS.

Amount of money-orders paid	$21,222 16	
Amount of money-orders repaid	417 43	
Amount transferred to domestic fund	70,616 57	
Amount paid Switzerland	89,870 92	
Amount paid for incidental expenses	9 70	
Amount paid for commissions and clerk-hire	622 12	
Miscellaneous items	1 68	
Balance in hands of postmasters June 30, 1874	745 89	
		183,506 47

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

No. 11.—*Statement showing the revenue which accrued on money-order transactions with Switzerland for the fiscal year ended June* 30, 1870.

Amount of fees received on orders issued		$127 4[illegible]
International charges deducted by New York office		283 1[illegible]
		410 5[illegible]
Commissions allowed postmasters	$18 18	
Net revenue	392 33	
		410 5[illegible]

J. J. MARTIN,
Auditor

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published, which was incorrect.

No. 12.—*Statement showing the revenue which accrued on money-order transactions with Switzerland for the fiscal year ended June* 30, 1871.

Amount of fees received on orders issued		$227 9[illegible]
International charges deducted by New York office		480 3[illegible]
		708 [illegible]
Commissions allowed postmasters	$16 72	
Net revenue	691 58	
		708 [illegible]

J. J. MARTIN.
Auditor

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published which was incorrect.

No. 13.—*Statement showing the revenue which accrued on money-order transactions with Switzerland for the fiscal year ended June* 30, 1872.

Amount of fees received on orders issued		$981 63
International charges deducted by New York office		832 11
		1,813 74
Commissions allowed postmasters	$26 11	
Excess of commissions paid Switzerland	327 62	
Incidental expenses	57 75	
Net revenue	1,402 26	
		1,813 74

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published, which was incorrect.

No. 14.—*Statement showing the revenue which accrued on money-order transactions with Switzerland for the fiscal year ended June* 30, 1873.

Amount of fees received on orders issued		$2,164
Commissions allowed postmasters	$19 36	
Excess of commissions paid Switzerland	622 83	
Incidental expenses	5 00	
Net revenue	1,516 81	
		2,164

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published, which was incorrect.

No. 15.—*Statement showing the revenue which accrued on money-order transactions with Switzerland for the fiscal year ended June* 30, 1874.

Amount of fees received on orders issued		$2,006 50
Commissions and clerk-hire allowed	$622 12	
Excess of commissions paid Switzerland	493 20	
Incidental expenses	9 70	
Net revenue	881 48	
		2,006 50

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

No. 16.—*Statement showing the transactions of the Money-Order Office of the United States with the United Kingdom of Great Britain and Ireland for the fiscal year ended June 30, 1874.*

States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue. Total fees received.	Transferred from domestic money-order fund.	Balance due postmasters.	Number of orders paid.	Amount of orders paid.	Amount of orders repaid.	Transferred to domestic money-order fund.	Amount paid United Kingdom.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
Alabama	82	$0 24	$1,816 90	$52 75	$492 45	$0 40	31	$676 46		$1,683 00			$0 46	$2 08	$0 74
Arizona Territory	32	50 19	1,025 70	27 50	82 69		2	35 21	$50 00	1,094 50			2 65	1 70	2 02
Arkansas	114	50 72	3,247 20	86 50	121 00	08	14	291 49		3,212 53			88	60	
California	1,911	192 16	39,476 84	1,158 75	2,361 14	18 93	309	6,579 46	113 05	36,304 55			53 12	164 20	3 44
Colorado Territory	1,269	74 08	32,364 95	883 75	176 00	8 36	77	1,464 86	20 00	31,981 42			35 16	50	5 20
Connecticut	2,625	499 46	43,847 49	1,362 50	1,794 04	16 44	321	5,306 19	303 55	41,739 05		$0 50	51 49	53 74	5 41
Dakota Territory	6	50 37	130 25	3 75	153 00		8	154 47		182 00			72	18	
Delaware	215		3,616 28	112 75	143 19	1 24	40	670 81		3,189 29			10 20		3 10
District of Columbia	586	42	11,826 82	352 25	121 00		55	1,027 21	16 89	11,256 00				39	
Florida	190	41 27	5,697 43	151 75	297 89	2 70	22	376 60		5,794 50			15 20	2 09	2 65
Georgia	302	58 60	6,953 62	194 50	674 60		42	898 15		6,962 80			20	20 17	
Idaho Territory	252	47 52	8,631 22	235 50		11 61				8,904 00			21 56		20
Illinois	4,619	1,223 17	90,795 90	2,673 00	7,786 89	21 69	1,299	26,540 59	510 29	75,107 77			75 78	259 09	7 13
Indiana	1,332	1,590 37	25,815 76	759 25	2,292 77	47 49	181	3,761 85	64 94	26,538 62		50	30 53	108 39	81
Iowa	619	527 79	10,824 46	329 75	4,149 73	7 55	264	5,334 15	58 00	10,316 57			26 48	105 05	1 03
Kansas	244	325 25	4,300 02	125 75	6,093 17	2 44	338	7,454 22	15 30	3,307 93			22 88	45 39	91
Kentucky	314	172 01	6,216 69	184 25	1,227 98	31	81	1,800 31	57 80	5,882 97			10 87	35 96	13 33
Louisiana	363	48 03	8,735 70	244 25	2,294 00		205	4,525 33		6,662 00			2 60	132 05	
Maine	3,282	405 89	107,535 69	2,807 25	1,592 08	41 61	118	2,824 65	67 75	109,172 45			256 95	5 31	55 41
Maryland	706	21 85	11,782 10	360 50	385 56	2 89	129	2,425 65	69 57	9,998 45			13 65	41 30	4 28
Massachusetts	10,305	1,336 52	191,074 19	5,777 75	4,828 01	14 16	1,334	24,441 70	544 16	177,244 57		2 25	663 99	123 76	10 20
Michigan	2,902	1,415 58	54,769 09	1,622 00	5,750 58	66 69	471	10,063 96	425 53	52,961 80			110 30	55 56	6 79
Minnesota	271	237 66	6,847 48	196 00	3,063 90	3 90	195	4,364 30	5 00	5,939 61			14 02	68 72	7 20
Mississippi	97	68 93	2,056 30	58 75	359 93	6 47	24	489 40		2,055 44			4 66	71	17
Missouri	1,368	779 35	35,232 98	967 00	2,190 72	11 40	386	8,033 07	62 25	30,843 15			82 77	179 51	70
Montana Territory	67	1 30	1,499 10	42 50	32 96	07	2	13 87	30 00	1,531 00			37	69	
Nebraska	238	135 69	4,014 62	118 75	1,658 51	1 39	131	2,643 97		3,269 27			12 60	3 37	45
Nevada	351	50 41	7,623 51	230 75	45 08	3 16	3	62 90		7,855 48			4 20	28 18	2 15
New Hampshire	1,040	622 76	22,623 79	647 25	888 40	6 62	87	1,606 60	77 00	22,978 08			60 51	60 65	5 98
New Jersey	4,104	280 22	62,451 12	2,014 25	3,083 38	39 87	891	14,620 43	250 18	52,790 06			93 71	82 81	13 63
New Mexico Territory	12		380 75	10 25	52 00				50 00	300 00		1 25	96	64	15
New York	18,148	2,854 46	304,827 87	9,570 25	1,451,374 79	16 52	4,743	80,968 18	852 78	257,195 25	$1,410,653 65	401 95	18,410 97	129 45	23 66
North Carolina	75	7 60	1,704 45	40 25	1,185 00	71	55	1,314 68		1,020 00			7 53	4 80	
Ohio	4,838	1,099 33	95,900 64	2,830 25	7,034 56	00 97	809	10,581 18	189 70	80,843 02		56 50	100 71	114 95	0 [illegible]
Oregon	185	51 21	4,007 15	130 00	65 03	40	5	64 82		5,179 70			5 28	1 [illegible]	1 40
Pennsylvania	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			455 40	[illegible]	10 02

Rhode Island	2,009	48 68	38,750 09	1,171 75	678 00	6 16	257	4,864 38	52 32	35,651 73			65 55	10 56	10 14
South Carolina	201	67	7,719 65	199 00	212 00	5 10	24	479 98		7,637 00			18 61	83	
Tennessee	359	113 02	8,460 60	241 25	1,007 00	01	115	2,440 08		7,373 00			1 09	6 98	73
Texas	366	40 47	8,867 30	245 75	2,122 59	1 57	145	3,470 51	220 00	7,590 88			4 55	34 99	26 75
Utah Territory	651	11 12	11,497 35	343 25	643 27	1 37	98	2,351 57	52 50	10,010 14			6 62	75 53	
Vermont	409	532 06	6,968 62	218 75	377 92	63	26	500 31	28 00	7,542 18			18 66	28 41	49
Virginia	674	69 71	15,588 10	435 25	1,549 01	22 94	160	3,319 77		14,315 85			10 24	17 94	1 21
Washington Territory	52	23 39	1,756 95	46 00	47 63	1 14	10	232 15		1,638 00			4 96		
West Virginia	192	78	3,301 47	101 25	176 60	1 02	15	283 86		3,290 67			5 61		98
Wisconsin	1,040	872 40	20,917 51	608 25	5,385 75	5 14	255	5,385 63	159 25	22,094 19			42 76	102 25	4 97
Wyoming Territory	37		880 00	25 00	73 85	45	3	72 85		904 00			2 37		08
Total	77,351	19,454 73	1,491,320 31	44,508 75	1,537,839 98	492 11	15,992	303,773 66	4,632 23	1,350,373 83	1,410,653 65	462 95	20,858 44	2,619 80	241 32

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

No. 17.—*Statement of receipts and disbursements of the Money-Order Office with the United Kingdom of Great Britain and Ireland for the fiscal year ended June* 30, 1874.

RECEIPTS.

Balance in hands of postmasters June 30, 1873		$19,454 7
Amount received for money-orders issued		1,491,320 2
Amount received for fees		44,50[illegible]
Amount transferred from domestic fund		1,537,289 [illegible]
Amount due postmasters		492 1
		3,092,615 [illegible]

DISBURSEMENTS.

Amount of money-orders paid	$303,773 66	
Amount of money-orders repaid	4,632 23	
Amount transferred to domestic fund	1,350,373 83	
Amount paid United Kingdom	1,410,653 65	
Amount paid for incidental expenses	462 95	
Amount paid for commissions and clerk-hire	20,858 44	
Miscellaneous items	241 32	
Balance in hands of postmasters June 30, 1874	2,619 80	
		3,092,615 [illegible]

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

No. 18.—*Statement showing the revenue which accrued on money-order transactions with the United Kingdom of Great Britain and Ireland for the fiscal year ended June* 30, 1874.

Amount of fees received on orders issued		$22,466 [illegible]
Commissions and clerk-hire	$8,626 71	
Excess of commissions paid United Kingdom	5,943 26	
Incidental expenses	1,205 15	
Net revenue	6,691 73	
		22,466 [illegible]

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published which was incorrect.

No. 19.—*Statement showing the revenue which accrued on money-order transactions with the United Kingdom of Great Britain and Ireland for the fiscal year ended June* 30, 1874.

Amount of fees received on orders issued		$40,504 [illegible]
Commissions and clerk-hire	$14,857 78	
Excess of commissions paid United Kingdom	10,961 42	
Incidental expenses	629 40	
Net revenue	14,055 65	
		40,504 [illegible]

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published which was incorrect.

No. 20.—*Statement showing the transactions of the Money-Order Office of the United States with the German Empire for the fiscal year ended June 30, 1874.*

States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue. Total fees received.	Transferred from domestic money-order fund.	Balance due postmasters.	Number of orders paid.	Amount of orders paid.	Amount of orders repaid.	Transferred to domestic money-order fund.	Amount paid German Empire.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
Alabama	191	$0 64	$5,523 50	$147 70	$450 05	.....	30	$827 58	$50 00	$5,242 00	.....	.....	.....	$2 31	.....
Arizona Territory	7	44	295 00	7 50	111 00	$0 06	4	110 00	.....	303 00	.....	.....	.....	1 00	.....
Arkansas	106	131 60	2,215 25	62 30	137 29	.....	18	431 41	3 00	2,108 23	.....	.....	$2 35	1 45	.....
California	1,585	108 51	44,892 38	1,213 85	2,912 30	7 30	393	10,494 34	134 00	38,295 25	.....	.....	33 29	174 87	$2 59
Colorado Territory	72	73 08	1,936 75	51 25	876 00	01	53	1,515 42	.....	1,421 00	.....	.....	10	57	.....
Connecticut	449	14 41	8,777 01	242 45	4,216 38	31	226	5,895 97	53 00	7,285 00	.....	$0 75	10 40	4 76	68
Dakota Territory	13	84 13	286 00	7 90	1,354 00	.....	56	1,461 84	7 00	258 00	.....	.....	4 38	81	.....
Delaware	34	21 00	567 40	16 20	109 52	29	6	172 55	.....	540 00	.....	.....	1 84	.....	02
District of Columbia	432	36	10,428 66	281 25	475 00	.....	145	4,070 09	185 00	6,930 00	.....	.....	.....	18	.....
Florida	53	1 13	1,896 50	47 40	150 50	29	8	203 43	.....	1,814 75	.....	.....	3 07	2 38	19
Georgia	215	2 52	6,158 91	163 50	387 67	.....	22	546 12	131 00	5,878 41	.....	.....	05	157 02	.....
Idaho Territory	18	32	494 75	13 05	379 11	32	12	367 81	50 00	466 93	.....	25	2 15	41	.....
Illinois	3,325	343 36	64,488 49	1,778 15	38,114 26	66 97	2,694	71,854 62	572 60	32,027 89	.....	6 50	118 65	202 69	8 28
Indiana	727	244 83	12,857 02	360 15	10,680 50	4 04	459	12,466 99	51 00	11,449 58	.....	50	25 59	91 62	61 26
Iowa	648	615 24	12,379 39	342 35	21,557 81	9 49	867	24,020 07	262 00	10,327 92	.....	5 15	58 29	225 16	5 69
Kansas	116	57 19	2,398 75	66 05	6,138 33	2 41	247	6,805 55	10 00	1,832 40	.....	.....	11 23	1 68	1 87
Kentucky	299	125 75	6,900 92	185 65	2,976 73	35	194	5,136 78	15 00	5,012 68	.....	.....	7 74	16 24	96
Louisiana	196	97 47	4,063 85	113 20	4,833 00	08	275	7,240 35	75 00	1,650 25	.....	.....	98	141 02	.....
Maine	112	1 31	3,801 00	97 85	187 28	.....	11	266 24	5 00	3,814 75	.....	.....	21	1 24	.....
Maryland	1,397	90	29,307 89	801 80	778 47	1 13	371	8,405 96	227 00	22,247 42	.....	2 96	5 83	24	84
Massachusetts	1,032	121 85	25,245 91	684 70	1,409 52	34	233	5,846 08	149 25	21,321 00	.....	.....	104 10	40 98	91
Michigan	1,251	113 51	23,980 55	669 10	16,659 60	8 93	980	26,112 28	220 18	14,963 37	.....	2 25	48 33	82 81	2 47
Minnesota	407	244 93	7,140 36	198 00	24,725 16	15 76	947	26,221 13	89 40	5,640 58	.....	65	64 01	303 56	4 88
Mississippi	41	6 52	898 00	24 65	521 56	30	22	618 89	.....	829 01	.....	.....	2 05	94	14
Missouri	820	225 20	17,238 11	475 20	14,353 96	6 49	985	25,845 99	176 75	6,082 04	.....	3 00	82 51	105 23	3 44
Montana Territory	70	78	2,181 25	56 20	209 12	97	10	245 64	15 00	2,184 72	.....	.....	1 49	1 41	.....
Nebraska	148	17 17	2,892 85	77 90	10,197 56	4 14	388	10,787 24	27 00	2,235 76	.....	15	23 66	41 80	4 01
Nevada	134	60	4,495 20	118 65	429 52	52	19	518 27	.....	4,523 00	.....	.....	2 54	68	.....
New Hampshire	80	90	1,681 50	46 45	44 00	77	5	130 36	.....	1,635 32	.....	.....	4 50	1 91	1 53
New Jersey	1,087	89 53	20,088 20	563 75	13,848 77	8 89	849	21,971 33	151 00	12,392 89	.....	1 75	45 51	35 51	1 24
New Mexico Territory	11	.....	430 00	11 00	223 00	04	8	212 91	.....	390 00	.....	.....	1 60	.....	59 53
New York	9,355	114 14	206,239 74	5,709 15	203,601 39	1 57	5,079	122,524 28	722 58	148,824 70	$137,365 99	91 90	6,085 94	48 98	1 62
North Carolina	207	3 13	7,255 55	188 45	286 00	3 50	24	625 38	.....	7,086 00	.....	.....	19 68	2 60	2 97
Ohio	2,648	404 60	56,049 32	1,535 25	13,056 67	5 09	1,201	30,733 81	400 00	39,631 68	.....	1 00	60 94	214 35	9 15
Oregon	169	1 36	4,656 10	126 55	373 10	.....	24	663 68	5 65	4,464 50	.....	.....	1 88	21 40	.....
Pennsylvania	2,253	197 81	44,095 84	1,216 75	19,525 22	8 45	1,411	35,498 28	434 50	28,784 00	.....	2 75	79 24	236 49	8 81
Rhode Island	149	74	3,241 45	87 70	179 00	.....	15	363 06	15 05	3,126 00	.....	25	3 28	1 25	.....
South Carolina	34	76	812 25	22 45	575 00	76	30	727 77	.....	681 00	.....	.....	2 09	36	.....

No. 20.—*Statement showing the transactions of the Money-Order Office of the United States with the German Empire, &c.*—Continued.

States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue. Total fees received.	Transferred from domestic money-order fund.	Balance due postmasters.	Number of orders paid.	Amount of orders paid.	Amount of orders repaid.	Transferred to domestic money-order fund.	Amount paid German Empire.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
Tennessee	150	$41 98	$3,018 53	$83 55	$2,222 00	$0 19	108	$2,951 68	$5 00	$2,380 00	.....	$0 15	$1 70	$27 64	$0 08
Texas	482	59 74	12,905 09	350 25	5,954 48	4 91	321	9,022 21	.....	9,779 61	.....	.....	26 16	442 63	3 86
Utah Territory	43	97	1,290 50	33 15	791 09	.....	29	817 57	.....	1,296 75	.....	.....	91	32	16
Vermont	2	05	14 75	65	121 13	03	7	120 40	.....	14 00	.....	.....	34	1 61	26
Virginia	290	76 05	7,363 28	199 65	1,731 88	50	90	2,462 83	30 00	6,247 43	.....	75	4 49	25 54	32
Washington Territory	38	41	761 75	21 15	640 84	.....	25	702 42	.....	717 00	.....	.....	3 67	1 06	.....
West Virginia	136	1 00	2,710 60	74 00	866 08	.....	44	1,144 01	61 00	2,444 00	.....	.....	1 40	1 27	.....
Wisconsin	1,499	541 82	25,118 63	707 10	38,504 92	17 13	1,650	45,691 44	240 75	18,465 50	.....	90	98 12	383 87	9 02
Wyoming Territory	11	64	300 00	8 00	366 00	.....	12	364 66	.....	308 00	.....	.....	1 66	32	.....
Total	32,542	4,190 38	701,634 73	19,288 95	468,241 77	182 33	20,607	535,216 72	4,573 71	505,953 29	$137,365 99	121 55	7,059 95	3,050 17	196 78

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

No. 21.—*Statement of the receipts and disbursements of the Money-Order Office with the German Empire for the fiscal year ended June 30, 1874.*

RECEIPTS.

Balance in hands of postmasters June 30, 1873		$4,190 38
Amount received for money-orders issued		701,634 73
Amount received for fees		19,288 95
Amount transferred from domestic fund		468,241 77
Balance due postmasters		182 33
		1,193,538 16

DISBURSEMENTS.

Amount of money-orders paid	$535,216 72	
Amount of money-orders repaid	4,573 71	
Amount transferred to domestic fund	505,953 29	
Amount paid German Empire	137,365 99	
Amount paid for incidental expenses	121 55	
Amount paid for commissions and clerk-hire	7,059 95	
Miscellaneous items	196 78	
Balance in the hands of postmasters June 30, 1874	3,050 17	
		1,193,538 16

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

No. 22.—*Statement showing the revenue which accrued on money-order transactions with the German Empire for the fiscal year ended June* 30, 1873.

Amount of fees received on orders issued		$11,662 80
Commissions and clerk-hire	$1,377 50	
Excess of commissions paid German Empire	2,173 92	
Incidental expenses	316 15	
Net revenue	7,795 23	
		11,662 80

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published, which was incorrect.

No. 23.—*Amount of letter-postage on British mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Cunard line	$12,378 70	$18,109 78	.....	$148,684 82	$179 1[illegible]
Dale, or Inman line	8,177 59	12,393 36	.....	95,880 19	116,4[illegible]
North German Lloyd, of Bremen	6,710 20	9,663 79	.....	54,844 03	71,2[illegible]
Canadian line	1 06	1 34	.....	107 00	109 4
White Star line	133 62	13 42	.....	955 36	1,102 4[illegible]
Liverpool and Great Western Steam Company	.....	1 32	.....	2 02	3 3
National line	.....	1 26	.....	48	1 7[illegible]
American Steamship Company	19 30	.....	.....	7 02	2[illegible]
Hamburg-American Packet Company	12 74	88	.....	1 12	14 7[illegible]
Total	27,433 21	40,185 15	.....	300,482 04	36[illegible]
Amount received	67,618 36	.....	$300,482 04	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Cunard line	$2,360 54	$67,692 47	.....	$3,762 70	$73,815 7[illegible]
Dale, or Inman line	233 00	4,222 39	.....	270 34	4,725 7[illegible]
North German Lloyd, of Bremen	3,576 00	26,112 04	.....	1,814 56	31,502 6[illegible]
Canadian line	.....	16,941 14	.....	626 80	17,567 9[illegible]
White Star line	5,575 62	95,524 57	.....	6,316 58	107,416 7[illegible]
Liverpool and Great Western Steam Company	1,178 40	114,799 71	.....	8,022 56	124,000 6[illegible]
Eagle line	52 40	3,284 16	.....	222 04	3,558 6[illegible]
American Steamship Company	.....	936 08	.....	58 88	994 9[illegible]
Hamburg-American Packet Company	4,778 43	52,532 06	.....	5,626 58	62,937 0[illegible]
Total	17,754 39	382,044 62	.....	26,731 04	426,530 [illegible]
Amount sent	399,799 01	.....	.....	26,731 04	.....

Amount collected in the United States	$467,417 [illegible]
Amount collected in the United Kingdom	327,213 [illegible]
Total	794,630 [illegible]
Excess collected in the United States	140,204 [illegible]
Increase compared with last fiscal year	23,699 [illegible]

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 24.—*Amount of letter-postage on German mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Cunard line, via England	$2,246 73	$7,445 41		$12,417 39	$22,109 53
Dale line, via England	2,839 48	10,927 27		12,337 81	26,104 56
North German Lloyd, of Bremen, via England	2,744 22	8,558 26		14,154 45	25,456 93
Hamburg-American Packet Company, via France	1,241 85	4,039 08		3,527 17	8,808 10
North German Lloyd of Bremen, direct	1,592 27	4,238 35		39,538 31	45,368 93
Hamburg-American Packet Company, direct	2,104 96	6,320 40		49,514 95	57,940 31
Eagle line, direct from Hamburg	26 74	84 50		640 20	751 44
Baltic Lloyd, direct from Stettin		4 44		7 68	12 12
Total	12,796 25	41,617 71		132,137 96	186,551 92
Amount received	54,413 96		$132,137 96		

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Cunard line, via England	$327 61	$7,608 32		$876 89	$8,812 82
Liverpool and Great Western Steam Company, via England	171 54	20,895 14		2,826 93	23,893 61
North German Lloyd, of Bremen, via England	1,517 61	26,662 76		1,337 59	29,517 96
Hamburg-American Packet Company, via England	1,435 86	12,372 55		4,215 97	18,024 38
Eagle line, via England	49 45	1,783 13		1,369 06	3,201 64
North German Lloyd, of Bremen, direct	1,121 82	60,026 57		7,458 61	68,607 00
Hamburg-American Packet Company, direct	736 10	49,321 21		5,416 14	55,473 45
Eagle line, direct to Hamburg	31 52	4,903 87		789 86	5,725 25
Baltic Lloyd, direct to Stettin		3 12		72	3 84
Total	5,391 51	183,576 67		24,291 77	213,259 95
Amount sent	188,968 18			24,291 77	

Amount collected in the United States	$243,382 14
Amount collected in Germany	156,429 73
Total	399,811 87
Excess collected in the United States	86,952 41
Decrease compared with last fiscal year	77,384 51

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
October 10, 1874.

No. 25.—*Amount of letter-postage collected on French mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

RECEIVED.

Lines.	Unpaid distributed.	Unpaid.	Paid.	Paid distributed.	Total.
Hamburg-American Packet Company	$1,110 60	$1,531 50	.....	.....	$2,642 10
French Steamship Company	3,442 80	3,418 30	.....	.....	6,861 10
Baltic Lloyd	2 10	14 00	.....	.....	16 10
North German Lloyd, of Bremen	59 40	60 00	.....	.....	119 40
Total	4,614 90	5,043 80	.....	.....	9,658 70
Amount received	.....	9,658 70	.....	.....	.....

SENT.

Lines.	Paid distributed.	Paid.	Paid stamps.	Unpaid.	Total.
Hamburg-American Packet Company	$3,402 10	$180 80	.....	.....	$3,582 90
French Steamship Company	2,540 40	.....	.....	.....	2,540 40
Eagle line	337 90	6 00	.....	.....	343 90
Total	.....	186 80	.....	.....	6,467 20
Amount sent	6,280 40	6,467 20	.....	.....	.....

Amount collected in the United States	$16,125 90
Amount collected in France	Unknown.
Total collected in the United States	16,125 90
Decrease compared with last fiscal year	1,216 60

No postal convention in operation with France during the fiscal year.

J. J. MARTIN,
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OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 26.—*Amount of letter-postage collected on Belgian mails received in and sent from the United States during the fiscal year ended June* 30, 1874.

RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Cunard line	$164 63	$357 98	.....	$2,344 62	$2,867 23
Dale, or Inman line	137 17	373 18	.....	1,724 66	2,235 01
North German Lloyd, of Bremen	147 14	308 28	.....	1,664 97	1,120 39
Red Star line	2 70	25 12	.....	200 60	228 42
Baltic Lloyd	30	24	.....	18	72
Total	451 94	1,064 80	.....	5,935 03	7,451 77
Amount received	1,516 74	.....	$5,935 03	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Liverpool and Great Western Steam Company	$19 81	$900 90	.....	$708 52	$1,629 23
North German Lloyd, of Bremen	161 14	1,810 52	.....	454 56	2,426 22
Hamburg American Packet Company	118 88	1,018 54	.....	293 76	1,431 18
Eagle line	3 52	165 22	.....	51 92	220 66
Cunard line	27 52	624 97	.....	132 40	784 89
Red Star line	.....	26 90	.....	1 50	28 40
Baltic Lloyd	.....	16 20	.....	.....	16 20
French, Edge & Co.'s line	.....	3 84	.....	.....	3 84
Total	330 87	4,567 09	.....	1,642 66	6,540 62
Amount sent	4,897 96	.....	.....	1,642 66	.....

Amount collected in Belgium	$7,577 69
Amount collected in the United States	6,414 70
Total	13,992 39
Excess collected in Belgium	1,162 99
Decrease compared with last fiscal year	630 46

J. J. MARTIN,
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OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 27.—*Amount of letter-postage on Netherlands mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

RECEIVED.

Lines.	Unpaid distributed.	Unpaid.	Paid.	Paid distributed.	Total.
Cunard line	$670 55	$47 10	$2,634 22	.....	$3,351 87
Dale, or Inman line	1,023 70	63 30	2,853 52	.....	3,940 52
North German Lloyd, of Bremen	834 15	58 55	2,455 41	.....	3,348 11
Total	2,528 40	168 95	7,943 15	.....	10,640 50
Amount received	.....	2,697 35	7,943 15	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Liverpool and Great Western Steam Company	.....	$2,536 40	.....	$498 86	$3,035 26
North German Lloyd, of Bremen	.....	3,594 30	.....	546 13	4,140 43
Hamburg-American Packet Company	.....	2,377 20	.....	366 78	2,743 98
Eagle line	.....	343 70	.....	64 26	407 96
Cunard line	.....	1,003 70	.....	157 65	1,161 35
Total	.....	9,855 30	.....	1,633 68	11,488 98
Amount sent	$9,855 30	.....	.....	1,633 68	.....

Amount collected in the United States	$12,552 65
Amount collected in the Netherlands	9,576 83
Total	22,129 48
Excess collected in the United States	2,975 82
Increase compared with last fiscal year	17 09

J. J. MARTIN,
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OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 28.—*Amount of letter-postage on Italian mails received in and sent from the United States during the fiscal year ended June* 30, 1874.

RECEIVED.

Lines.	Unpaid distributed.	Unpaid.	Paid.	Paid distributed.	Total.
Cunard line	$1,881 50	$1,040 93	$5,273 84	.....	$8,196 27
Dale, or Inman line	1,445 15	961 40	4,100 86	.....	6,507 41
North German Lloyd, of Bremen	2,548 11	1,591 78	6,257 74	.....	10,397 63
Total	5,874 76	3,594 11	15,632 44	.....	25,101 31
Amount received	.....	9,468 87	15,632 44	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Liverpool and Great Western Steam Company	.....	$5,361 10	.....	$511 39	$5,872 49
North German Lloyd, of Bremen	.....	6,478 50	.....	610 39	7,088 89
Hamburg-American Packet Company	.....	3,159 06	.....	272 40	3,431 46
Cunard line	.....	2,329 70	.....	207 10	2,536 80
Eagle line	.....	839 10	.....	77 50	916 60
Total	.....	18,167 46	.....	1,678 78	19,846 24
Amount sent	$18,167 46	.....	.....	1,678 78	.....

Amount collected in the United States	$27,636 33
Amount collected in Italy	17,311 22
Total	44,947 55
Excess collected in the United States	10,325 11
Increase compared with last fiscal year	7,517 40

J. J. MARTIN,
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OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 29.—*Amount of letter-postage collected on Switzerland mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Cunard line, via England	$235 51	$1,502 60	.....	$5,921 08	$7,659 19
Dale line, via England	134 90	1,335 10	.....	4,892 62	6,362 62
North German Lloyd, of Bremen, via England	124 05	780 15	.....	3,539 63	4,443 83
North German Lloyd, of Bremen, direct, service, via Bremen	2 08	41 60	.....	735 52	779 20
Hamburg-American Packet Company, direct service, via Hamburg	2 91	36 72	.....	868 00	907 63
Total	499 45	3,696 17	.....	15,956 85	20,132 47
Amount received	4,195 62	.....	$15,956 85	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Liverpool and Great Western Steam Company, via England	.....	$3,819 70	.....	$1,011 43	$4,831 13
North German Lloyd, of Bremen, via England	.....	4,835 10	.....	1,072 66	5,907 76
Hamburg-American Packet Company, by England	.....	2,954 51	.....	708 16	3,662 67
Eagle line, via England	.....	572 20	.....	146 69	718 89
Cunard line, via England	.....	1,491 70	.....	324 23	1,815 93
North German Lloyd, of Bremen, direct service, via Bremen	.....	842 96	.....	86 00	928 96
Hamburg-American Packet Company, direct service, via Hamburg	.....	691 20	.....	70 16	761 36
Eagle line, direct, via Hamburg	.....	74 16	.....	10 40	84 56
Total	.....	15,281 53	.....	3,429 75	18,711 28
Amount sent	15,281 53	.....	.....	3,429 75	.....

Amount collected in the United States	$19,477 37
Amount collected in Switzerland	19,386 40
Total	38,863 77
Excess collected in the United States	90 97
Increase compared with last fiscal year	1,936 94

J. J. MARTIN.
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OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 30.—*Amount of letter-postage collected on Danish mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Hamburg-American Packet Company	$211 54	$1,224 85	.....	$4,484 08	$5,920 47
North German Lloyd, of Bremen	213 15	1,062 72	.....	3,283 76	4,559 63
Total	424 69	2,287 57	.....	7,767 84	10,480 10
Amount received	2,712 96	.....	$7,767 84	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Hamburg-American Packet Company	.....	$5,397 38	.....	$586 77	$5,984 15
North German Lloyd, of Bremen	.....	3,188 55	.....	617 68	3,806 23
Eagle line	.....	213 99	.....	58 70	272 69
Baltic Lloyd	.....	21	.....	.....	21
Total	.....	8,800 13	.....	1,263 15	10,063 28
Amount sent	$8,800 13	.....	.....	1,263 15	.....

Amount collected in the United States	$11,512 39
Amount collected in Denmark	9,030 99
Total	20,543 38
Excess collected in the United States	2,481 40
Decrease compared with last fiscal year	9,272 57

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

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No. 31.—*Amount of letter-postage collected on Norwegian mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total
Hamburg-American Packet Company, via Hamburg	$623 27	$3,746 94	.....	$4,195 37	$8,565 58
North German Lloyd, of Bremen, via Bremen and England	545 98	3,275 83	.....	3,893 00	7,714 81
Funch, Edye & Co.'s line, (direct)	5 22	22 05	.....	138 38	165 65
Dale, or Inman line, via England	7 35	23 90	.....	31 80	63 05
Cunard line, via England	23 30	123 65	.....	161 10	308 05
Total	1,205 12	7,192 37	.....	8,419 59	16,817 08
Amount received	8,397 49	.....	$8,419 59	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total
Hamburg-American Packet Company, via Hamburg	.....	$8,631 64	.....	$1,802 61	$10,434 25
Eagle line, via Hamburg	.....	275 80	.....	177 40	453 20
North German Lloyd, of Bremen, via England	.....	2,803 97	.....	764 70	3,568 67
North German Lloyd, of Bremen, via Bremen	.....	2,246 00	.....	568 50	2,814 50
White Star line, via England	.....	414 40	.....	22 05	436 45
Funch, Edye & Co.'s line, (direct service)	.....	30 60	.....	.....	30 60
Total	.....	14,402 41	.....	3,335 26	17,737 67
Amount sent	$14,402 41	.....	.....	3,395 26	.....

Amount collected in the United States	$22,799 83
Amount collected in Norway	11,814 75
Total	34,614 58
Excess collected in the United States	10,985 08

Postal convention with Norway went into effect July 1, 1873.

J. J. MARTIN,
Auditor

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 32.—*Amount of letter-postage collected on Swedish mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

RECEIVED.

Lines.	Unpaid.	Unpaid, distributed.	Paid.	Paid, distributed.	Total.
Hamburg-American Packet Company, via Hamburg	$1,260 73	$9,839 09	.....	$1,626 20	$12,726 02
North German Lloyd, of Bremen, via Bremen	841 49	6,401 07	.....	914 92	8,157 48
North German Lloyd, of Bremen, via England	529 18	3,701 46	.....	865 58	5,096 22
Eagle Line, via Hamburg	39 06	225 06	.....	40 68	304 80
Dale, or Inman Line, via England	94 07	729 37	.....	124 49	947 93
Cunard Line, via England	73 43	574 00	.....	122 12	769 55
Total	2,837 96	21,470 05	.....	3,693 99	28,002 00
Amount received	24,308 01	.....	$3,693 99	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid, stamps.	Unpaid.	Total.
Hamburg-American Packet Company, via Hamburg	.....	$11,380 00	.....	$3,920 80	$15,300 80
Eagle Line, via Hamburg	.....	504 90	.....	332 92	837 82
North-German Lloyd, of Bremen, via England	.....	3,646 04	.....	1,565 34	5,211 38
White Star Line, via England	.....	396 37	.....	16 94	413 31
North German Lloyd, of Bremen, via Bremen	.....	2,411 00	.....	964 82	3,375 82
Total	.....	18,338 31	.....	6,800 82	25,139 13
Amount sent	$18,338 31	.....	.....	6,800 82	.....

Amount collected in the United States	$42,646 32
Amount collected in Sweden	10,494 81
Total	53,141 13
Excess collected in the United States	32,151 51

Postal convention with Sweden went into effect July 1, 1873.

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
October 10, 1874.

No. 33.—*Amount of letter-postage collected on European mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

RECEIVED.

Countries.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
The United Kingdom of Great Britain and Ireland	$27,433 21	$40,185 15	.....	$300,482 04	$368,100 40
Germany	12,796 25	41,617 71	.....	132,137 96	186,551 92
France	5,043 80	4,614 90	.....	.....	9,658 70
Belgium	451 94	1,064 80	.....	5,935 03	7,451 77
Netherlands	168 95	2,528 40	.....	7,943 15	10,640 50
Italy	3,594 11	5,874 76	.....	15,632 44	25,101 31
Switzerland	499 45	3,696 17	.....	15,956 85	20,152 47
Denmark	424 69	2,287 57	.....	7,767 84	10,480 10
Norway	1,205 12	7,192 37	.....	8,419 59	16,817 08
Sweden	2,837 96	21,470 05	.....	3,693 99	28,002 00
Total	54,455 48	130,531 88	.....	497,968 89	692,956 25
Amount received	184,987 36	.....	$497,968 89	.....	.....

SENT.

Countries.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
The United Kingdom of Great Britain and Ireland	$17,754 39	$382,044 62	.....	$36,731 04	$436,530 05
Germany	5,391 51	183,576 67	.....	24,291 77	213,259 95
France	186 80	6,280 40	.....	.....	6,467 20
Belgium	330 87	4,567 09	.....	1,642 66	6,540 62
Netherlands	.....	9,855 30	.....	1,633 68	11,488 98
Italy	.....	18,167 46	.....	1,678 78	19,846 24
Switzerland	.....	15,281 53	.....	3,429 75	18,711 28
Denmark	.....	8,800 13	.....	1,963 15	10,763 28
Norway	.....	14,402 41	.....	3,395 26	17,797 67
Sweden	.....	18,338 31	.....	6,800 82	25,139 13
Total	23,663 57	661,313 92	.....	70,866 91	755,844 40
Amount sent	$684,977 49	.....	.....	70,866 91	.....

Amount collected in the United States	$869,964 [illegible]
Amount collected in European countries	568,835 [illegible]
Total	1,438,800 [illegible]
Excesses collected in the United States	301,129 [illegible]
Increase compared with last fiscal year	32,293 [illegible]

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 34.—*Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and the United Kingdom in British mails during the fiscal year ended June 30, 1874.*

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	*Wt. in ozs.*	*Rates.*	*Wt. in ozs.*	*Lbs. Ozs.*	*Lbs. Ozs.*
Cunard line	2,797,284	891,695½	1,101,369	350,600½	373,331 02	85,039 01
Dale, or Inman line	1,825,253	582,416	74,736	24,780½	196,112 09½	5,531 03½
North German Lloyd, of Bremen	1,123,935	342,029½	368,377	115,920½	139,102 14	32,508 05½
Canadian line	1,806	645½	282,612	88,103½	3 05½	24,172 11½
White Star line	16,922	5,709	1,638,773	541,492½	115 01	129,375 10½
Liverpool and Great Western Steam Company	60	20½	1,888,141	613,131½	.....	146,903 09½
National line	17	6½	.....	.....	.....	.....
American Steamship Company	330	109½	15,528	5,140	12	1,849 03
Hamburg-American Packet Company	119	37	891,796	290,574½	.....	71,670 05
Eagle line	.....	.....	42,502	12,852	.....	2,363 03
Total	5,765,732	1,822,668½	6,303,834	2,042,596½	708,665 12½	499,413 04½
Increase compared with last fiscal year	47,182	5,806½	189,268	52,618½	45,076 08½	22,439 13

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 35.—*Number and weight of letters and weight of newspapers, &c., (including postal cards.) exchanged between the United States and Germany, in closed mails, through England and France, and by direct steamer, during the fiscal year ended June* 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	*Grams.*	*Rates.*	*Grams.*	*Grams.*	*Grams.*
Cunard line, via England	236,628	2,338,275	110,818	1,083,074	2,048,993	905,482
Dale, or Inman line, via England	267,432	2,643,975	.....	.....	1,845,961	.....
North German Lloyd, of Bremen, via England	273,866	2,718,378	380,402	2,887,464	2,790,095	5,241,875
Hamburg-American Packet Company, via France	85,777	789,974	.....	.....	1,113,595	.....
Hamburg-American Packet Company, via England	.....	.....	229,195	2,264,623	.....	1,422,079
North German Lloyd, of Bremen, direct	711,321	6,851,043	1,043,191	10,280,075	9,210,824	33,355,254
Hamburg-American Packet Company, direct	889,535	8,619,209	858,755	8,388,850	10,448,069	27,484,648
Baltic Lloyd, direct	165	1,594	58	634	193	26,939
Eagle line, direct	11,493	110,367	86,065	848,007	106,295	2,210,433
Liverpool and Great Western Steam Company, via England	.....	.....	302,331	2,962,764	.....	2,322,490
Eagle line, via England	.....	.....	38,616	420,688	.....	263,324
Total	2,476,217	24,072,815	3,049,431	29,136,179	27,564,025	73,232,564
Compared with last fiscal year: Decrease	252,676	1,605,290	393,672	3,752,187	.....	.....
Compared with last fiscal year: Increase	.....	.....	.....	.....	3,531,977	2,932,307

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 36.—*Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and France during the fiscal year ended June 30, 1874.*

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	*Grams.*	*Rates.*	*Grams.*	*Grams.*	*Grams.*
Hamburg-American Packet Co	26, 421	204, 524	34, 921	389, 964	29, 367	9, 215, 9[illegible]
French Steamship Company	68, 611	534, 235	25, 404	253, 817	1, 148, 879	1, 959, 6[illegible]
North German Lloyd, of Bremen	1, 394	9, 376			162	
Eagle line			3, 409	37, 449		780, 5[illegible]
Baltic Lloyd	161	1, 414				
Total	96, 587	749, 549	63, 734	681, 250	1, 178, 422	11, 955, 4[illegible]
Compared with last fiscal year: Decrease	7, 826	53, 243	4, 632	65, 911		
Compared with last fiscal year: Increase					213, 063	517, 7[illegible]

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 37.—*Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and Belgium during the fiscal year ended June 30, 1874.*

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	*Grams.*	*Rates.*	*Grams.*	*Grams.*	*Grams.*
Cunard line	32, 167	281, 131	9, 393	91, 267	983, 920	275, 2[illegible]
North German Lloyd, of Bremen	23, 777	196, 919	28, 313	268, 114	932, 582	948, 3[illegible]
Red Star line, direct	3, 701	28, 242	490	3, 934	2, 489	7, 6[illegible]
Baltic Lloyd, direct	8	73	270	2, 290		5, 3[illegible]
Dale, or Inman line	24, 669	212, 522			761, 454	
Liverpool and Great Western Steam Company			19, 228	181, 545		338, 9[illegible]
Hamburg-American Packet Co			16, 834	167, 135		365, 1[illegible]
Eagle line			2, 605	24, 296		78, 2[illegible]
Punch, Edye & Co.'s line			64	660		
Total	84, 322	718, 887	77, 197	739, 241	2, 680, 521	2, 269, 8[illegible]
Increase compared with last fiscal year	19, 845	162, 027	4, 029	55, 364	747, 970	234, 2[illegible]

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 38.—*Number and weight of letters and weight of newspapers, &c., exchanged between the United States and the Netherlands during the fiscal year ended June* 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	*Grams.*	*Rates.*	*Grams.*	*Grams.*	*Grams.*
Cunard line	30, 938	291, 561	11, 651	110, 894	599, 837	162, 766
North German Lloyd, of Bremen	30, 539	277, 500	41, 455	395, 206	548, 995	923, 853
Dale, or Inman line	35, 618	333, 015	.....	.....	565, 965	.....
Liverpool and Great Western Steam Company	.....	.....	30, 366	290, 379	.....	472, 308
Hamburg-American Packet Co	.....	.....	27, 210	268, 898	.....	339, 420
Eagle line	.....	.....	4, 091	36, 870	.....	57, 353
Total	97, 095	902, 076	114, 773	1, 092, 247	1, 714, 797	1, 955, 700
Compared with last fiscal year: Increase	7, 281	82, 911	.....	.....	451, 129	77, 721
Compared with last fiscal year: Decrease	.....	.....	5, 987	158, 314	.....	.....

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 39.—*Number and weight of letters and weight of newspapers, &c., exchanged between the United States and Switzerland, in closed mails, via England and Belgium, and by direct steamer, via Bremen and Hamburg, during the fiscal year ended June* 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	*Grams.*	*Rates.*	*Grams.*	*Grams.*	*Grams.*
Cunard line, via England	71, 065	581, 231	18, 182	165, 345	746, 061	382, 604
Dale, or Inman line, via England	59, 523	474, 937	.....	.....	382, 747	.....
North German Lloyd, of Bremen, via England	41, 220	339, 332	59, 132	535, 544	516, 752	1, 781, 087
Liverpool and Great Western Steam Company, via England	.....	.....	48, 530	444, 851	.....	1, 093, 369
Hamburg-American Packet Company, via England	.....	.....	36, 683	338, 465	.....	802, 220
Eagle line, via England	.....	.....	7, 200	62, 930	.....	139, 523
North German Lloyd, of Bremen, via Bremen	9, 535	92, 879	11, 637	115, 985	773, 248	1, 089, 459
Hamburg-American Packet Company, via Hamburg	11, 106	90, 784	9, 519	87, 265	979, 672	861, 610
Eagle line, via Hamburg	.....	.....	1, 057	9, 950	.....	87, 588
Total	192, 449	1, 579, 163	191, 940	1, 760, 335	3, 398, 480	6, 237, 460
Increase compared with last fiscal year	11, 108	100, 392	10, 726	182, 034	239, 659	689, 468

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 40.—*Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and Italy during the fiscal year ended June 30, 1874.*

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	*Grams.*	*Rates.*	*Grams.*	*Grams.*	*Grams.*
Cunard line	67, 613	492, 330	25, 243	210, 390	657, 608	569,[illegible]
Dale, or Inman line	53, 682	403, 756	.....	.....	701, 536	.....
North German Lloyd, of Bremen	84, 927	617, 222	70, 351	579, 966	910, 474	1,[illegible]
Liverpool and Great Western Steam Company	.....	.....	58, 332	487, 151	.....	1,[illegible]
Hamburg-American Packet Co.	.....	.....	34, 080	289, 920	.....	[illegible]
Eagle line	.....	.....	9, 114	74, 370	.....	[illegible]
Total	206, 222	1, 513, 308	197, 120	1, 641, 797	2, 269, 612	4,[illegible]
Increase compared with last fiscal year	22, 238	108, 898	44, 042	334, 720	222, 260	[illegible]

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 41.—*Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and Denmark during the fiscal year ended June 30, 1874.*

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	*Grams.*	*Rates.*	*Grams.*	*Grams.*	*Grams.*
Hamburg-American Packet Co.	76, 807	647, 739	83, 172	768, 160	819, 046	[illegible]
North German Lloyd, of Bremen	58, 178	509, 780	51, 903	475, 749	630, 588	[illegible]
Eagle line	.....	.....	3, 647	33, 125	.....	[illegible]
Baltic Lloyd	.....	.....	3	43	.....	.....
Total	134, 985	1, 157, 519	138, 725	1, 277, 077	1, 449, 634	1,[illegible]
Compared with last fiscal year: Decrease	104, 663	812, 047	.....	.....	.....	.....
Compared with last fiscal year: Increase	.....	.....	20, 565	194, 384	173, 218	[illegible]

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 42.—*Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and Sweden during the fiscal year ended June 30, 1874.*

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	*Grams.*	*Rates.*	*Grams.*	*Grams.*	*Grams.*
Hamburg-American Packet Company, via Germany	97,244	715,666	154,485	1,452,855	387,955	267,386
North German Lloyd, of Bremen, via Germany	62,061	439,420	33,686	316,190	183,159	266,149
North German Lloyd, of Bremen, via England	39,709	330,301	51,849	492,385	311,785	474,637
Eagle line, via Germany	2,343	15,725	7,988	72,559	10,040	32,480
Dale, or Inman line, via England	7,268	35,652	.....	.....	47,520	.....
Cunard line, via England	5,959	47,085	.....	.....	33,300	.....
White Star line, via England	.....	.....	4,504	43,050	.....	24,630
Baltic Lloyd, direct service	.....	.....	.....	.....	.....	6,251
Total	214,604	1,583,849	252,512	2,377,039	973,759	1,771,531

Postal convention with Sweden went into effect July 1, 1873.

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 43.—*Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and Norway during the fiscal year ended June 30, 1874.*

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	*Grams.*	*Rates.*	*Grams.*	*Grams.*	*Grams.*
Hamburg-American Packet Company, via Germany	71,328	570,530	99,152	934,403	228,545	860,664
North German Lloyd, of Bremen, via England and Germany	64,833	596,075	59,675	565,419	194,205	352,197
Funch, Edye & Co.'s line, direct service	2,613	20,991	510	4,599	46,315	100,014
Dale, or Inman line, via England	527	4,240	.....	.....	2,150	.....
Cunard line, via England	2,692	20,715	.....	.....	11,700	.....
Eagle line, via Germany	.....	.....	3,942	34,415	.....	11,873
White Star line, via England	.....	.....	4,291	40,430	.....	21,840
Total	141,993	1,122,551	167,570	1,579,266	482,915	1,346,588

Postal convention with Norway went into effect July 1, 1873.

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 44.—*Statement of letters and newspapers, with the several postages, received in and sent from the United States to Panama and Colon during the fiscal year ended June* 30, 1874.

Pacific Mail Steamship Company.	Letters.	Newspapers, &c.	Postage on letters.
Received	106,701	61,817	$11,489 63
Sent	100,655	164,205	15,631 [illegible]
Total	207,356	226,022	27,112 [illegible]
Add newspaper postages, at two cents each			4,520 44
Total postages			31,632 [illegible]
Compared with last fiscal year { Decrease	20,140		2,631 [illegible]
Compared with last fiscal year { Increase		12,574	

J. J. MARTIN, *Auditor*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 45.—*Statement of letters and newspapers, with the several postages, received in and sent from the United States to Mexico during the fiscal year ended June* 30, 1874.

United States and Mexican Steamship Company.	Letters.	Newspapers, &c.	Postage on letters.
Received	19,793	15,133	$581 [illegible]
Sent	32,129	44,469	3,921 [illegible]
Total	51,922	59,602	3,802 [illegible]
Add newspaper postages, at two cents each			1,192 [illegible]
Total postages			5,055 [illegible]
Increase compared with last fiscal year	8,744	9,693	915 [illegible]

J. J. MARTIN, *Auditor*.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 46.—*Statement of letters and newspapers, with the several postages, received in and sent from the United States to Brazil during the fiscal year ended June* 30, 1874.

United States and Brazil Steamship Company.	Letters.	Newspapers, &c.	Postage on letters.
Received	41,245	23,667	$5,886 [illegible]
Sent	54,786	58,757	8,722 [illegible]
Total	96,031	82,424	14,609 [illegible]
Add newspaper postages, at two cents each			1,648 [illegible]
Total postages			16,317 [illegible]
Compared with last fiscal year { Increase	6,575		4,089 [illegible]
Compared with last fiscal year { Decrease		6,570	

J. J. MARTIN, *Auditor*.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 47.—*Statement of letters and newspapers, with the several postages, received in and sent from the United States to Ecuador during the fiscal year ended June 30, 1874.*

Pacific Mail Steamship Company.	Letters.	Newspapers, &c.	Postage on letters.
Received	2,470	588	$494 00
Sent	3,744	6,731	748 80
Total	6,214	7,319	1,242 80
Add newspaper postages, at two cents each			146 38
Total postages			1,389 18
Increase compared with last fiscal year	461	342	111 24

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 48.—*Statement of letters and newspapers, with the several postages, received in and sent from the United States to Venezuela during the fiscal year ended June 30, 1874.*

Pim, Forwood & Co.'s line.	Letters.	Newspapers, &c.	Postage on letters.
Received	1,501	215	$148 07
Sent	3,926	2,244	392 60
Total	5,427	2,459	540 67
Add newspaper postages, at two cents each			49 18
Total postages			589 85
Increase compared with last fiscal year	4,425	2,357	487 61

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 49.—*Statement of letters and newspapers, with the several postages, received in and sent from the United States to New Granada during the fiscal year ended June 30, 1874.*

Pim, Forwood & Co.'s line.	Letters.	Newspapers, &c.	Postage on letters.
Received	8,734	1,797	$872 08
Sent	6,386	4,187	638 60
Total	15,120	5,984	1,510 68
Add newspaper postages, at two cents each			119 68
Total postages			1,630 36
Increase compared with last fiscal year	8,227	4,023	801 84

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 50.—*Statement of letters and newspapers, with the several postages, received in and sent from the United States to the West India Islands during the fiscal year ended June 30, 1874.*

West India mail-steamers.	Letters.	Newspapers, &c.	Postage on letters.
Received	516,062	142,929	$50,565 70
Sent	360,379	185,648	32,472 [illegible]
Total	876,441	328,577	89,041 [illegible]
Add newspaper postages, at two cents each			6,571 [illegible]
Total postages			95,615 [illegible]
Compared with last fiscal year ... Increase	38,235	9,873	
Compared with last fiscal year ... Decrease			1,356 [illegible]

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 51.—*Statement of letters and newspapers, with the several postages, received in and sent from the United States to Japan and China during the fiscal year ended June 30, 1874.*

Pacific Mail Steamship Company's steamers.	Letters.	Newspapers, &c.	Postage on letters.
Received	125,113	143,760	$15,640 [illegible]
Sent	99,241	170,003	9,289 [illegible]
Total	224,354	313,763	24,930 [illegible]
Add newspaper postages, at two cents each			6,275 [illegible]
Total postages			31,205 [illegible]
Increase compared with last fiscal year	7,829	41,347	2,935 [illegible]

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 52.—*Statement of letters and newspapers, with the several postages, received in and sent from the United States to Honolulu, Auckland, Melbourne, Sydney, &c., during the fiscal year ended June* 30, 1874.

California, Oregon, and Mexico Steamship Company.	Letters.	Newspapers, &c.	Postage on letters.
Received	37,319	27,794	$[illegible]
Sent	34,901	72,798	3,597 [illegible]
Total	72,220	100,592	4,065 [illegible]
Add newspaper postages, at two cents each			2,010 [illegible]
Total postages			6,075 [illegible]
Decrease compared with last fiscal year	13,489	43,592	3,186 [illegible]

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 53.—*Statement of the amount of letter-postages on the mails exchanged between the United States and Nova Scotia, Newfoundland, and Bermuda, by mail-steamers, with partial report of the number of letters and newspapers, during the fiscal year ended June 30, 1874.*

	Unpaid.	Unpaid distributed.	Paid distributed.	Number of letters.*	Number of newspapers, &c.*
Received	$877 80	$853 72	$11 41	$14,705	2,888
Sent			3,927 52	7,823	8,492

* Reported by the New York office only.

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 54.—*Amount of postages on mails exchanged between the United States and the British provinces during the fiscal year ended June* 30, 1874.

Amount on unpaid received	$17,012 11	
Amount on paid received	193,430 86	
		$210,442 97
Amount on unpaid sent	22,808 69	
Amount on paid sent	210,083 53	
		232,892 22
Total		443,335 19
Amount collected in the United States		227,095 64
Amount collected in the British provinces		216,239 55
Excess collected in the United States		10,856 09
Increase compared with last fiscal year		15,878 89
Number of letters sent		3,625,183
Number of letters received		3,409,207
Number of newspapers sent		1,131,443
Number of newspapers received		612,833

NOTE.—Several of the larger offices have failed to report the number of newspapers exchanged.

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT,
October 10, 1874.

No. 55.—*Number of letters exchanged between the United States and foreign countries during the fiscal year ended June 30, 1874.*

Countries.	Number of letters.	
	Received.	Sent.
United Kingdom of Great Britain and Ireland	5,765,732	6,303,[illegible]
Germany	2,476,217	3,049,[illegible]
France	96,587	63,[illegible]
Belgium	84,322	77,[illegible]
Netherlands	97,095	114,[illegible]
Switzerland	192,449	191,[illegible]
Italy	206,222	197,[illegible]
Denmark	134,985	138,[illegible]
Sweden	214,604	252,[illegible]
Norway	141,993	167,[illegible]
Panama	106,701	100,[illegible]
Mexico	19,793	32,[illegible]
Brazil	41,245	54,[illegible]
Ecuador	2,470	3,[illegible]
Venezuela	1,501	3,[illegible]
New Granada	8,734	6,[illegible]
West Indies, &c	516,062	360,[illegible]
China and Japan	125,113	99,[illegible]
Honolulu, &c	37,319	34,[illegible]
Nova Scotia and Bermuda*	14,705	7,[illegible]
Canadian provinces	3,409,207	3,625,[illegible]
Total	13,693,056	14,885,[illegible]
Increase compared with last fiscal year	566,545	553,[illegible]

* Partial returns only.

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 56.—*Amounts reported as due the steamers of the Dale or Inman line for services rendered during the fiscal year ended June* 30, 1874.

Quarter ended March 31, 1874	$[illegible]
Quarter ended June 30, 1874	1,554 [illegible]
Total amount paid	1,81[illegible]

Amounts reported as due the steamers of the North German Lloyd, of Bremen, for services rendered during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$9,662 [illegible]
Quarter ended December 31, 1873	11,134 [illegible]
Quarter ended March 31, 1874	10,566 [illegible]
Quarter ended June 30, 1874	10,09[illegible]
Total amount paid	41,46[illegible]

Amounts reported as due the steamers of the Canadian line for services rendered during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$1,67[illegible]
Quarter ended December 31, 1873	1,70[illegible]
Quarter ended March 31, 1874	1,78[illegible]
Quarter ended June 30, 1874	1,56[illegible]
Total amount paid	6,73[illegible]

Amounts reported as due the steamers of the Hamburg-American Packet Company for services rendered during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$13,018 82
Quarter ended December 31, 1873	13 093 75
Quarter ended March 31, 1874	13,466 70
Quarter ended June 30, 1874	11,132 09
Total amount paid	50,711 36

Amounts reported as due the steamers of the Cunard line for services rendered during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$1,761 91
Quarter ended December 31, 1873	1,409 13
Quarter ended March 31, 1874	13,098 59
Quarter ended June 30, 1874	12,290 09
Total amount paid	28,559 72

Amounts reported as due the steamers of the Liverpool and Great Western Steam Company for services rendered during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$17,236 33
Quarter ended December 31, 1873	19,688 95
Quarter ended March 31, 1874	7,930 77
Quarter ended June 30, 1874	7,088 31
Total amount paid	51,944 36

Amounts reported as due the steamers of the White Star line for services rendered during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$11,997 54
Quarter ended December 31, 1873	10,288 14
Quarter ended March 31, 1874	9,919 48
Quarter ended June 30, 1874	8,217 16
Total amount paid	40,422 32

Amounts reported as due the steamers of the Eagle line for services rended during the fiscal year ended June 30, 1874.

Quarter ended December 31, 1873	$391 48
Quarter ended March 31, 1874	1,754 53
Quarter ended June 30, 1874	1,722 21
Total amount paid	3,868 22

Amounts reported as due the steamers of the Red Star line for services rendered during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$8 47
Quarter ended December 31, 1873	1 22
Quarter ended March 31, 1874	2 26
Quarter ended June 30, 1874	5 79
Total amount paid	17 74

Amounts reported as due the steamers of Messrs. Funch, Edye & Co.'s line for services rendered during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$4 80
Quarter ended June 30, 1874	8 21
Total amount paid	13 01

Amounts reported as due the steamers of the American Steamship Company for services rendered during the fiscal year ended June 30, 1874.

Quarter ended March 31, 1874	$253 60
Quarter ended June 30, 1874	447 57
Total amount paid	701 17

Amounts reported as due the steamers of the Pacific Mail Steamship Company for the conveyance of mails between the United States and Panama during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$5,893 55
Quarter ended December 31, 1873	7,321 10
Quarter ended March 31, 1874	6,317 38
Quarter ended June 30, 1874	6,824 17
Total amount paid	26,356 50

Amounts reported as due the steamers conveying the mails between the United States and the West India Islands, Mexico, Brazil, Bermuda, New Granada, and New Zealand for services rendered during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$19,195 1[illegible]
Quarter ended December 31, 1873	15,351 13
Quarter ended March 31, 1874	17,638 03
Quarter ended June 30, 1874	16,670 6[illegible]
Total amount paid	68,855 02

Amounts reported as due the steamers conveying the mails between the United States and Nova Scotia for services rendered during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$55[illegible] 40
Quarter ended December 31, 1873	440 24
Quarter ended March 31, 1874	139 57
Quarter ended June 30, 1874	621 3[illegible]
Total amount paid	1,759 5[illegible]

The following reports for the transportation of closed mails, for the periods named, have been made during the fiscal year ended June 30, 1874:

To the steamers of the Liverpool and Great Western Steam Company:

For quarter ended December 31, 1872	$2,296 2[illegible]
For quarter ended March 31, 1873	1,411 3[illegible]
For quarter ended June 30, 1873	2,274 7[illegible]
For quarter ended September 30, 1873	350 11
Total	6,332 47

To the steamers of the Cunard line:

For quarter ended December 31, 1872	$84 34
For quarter ended March 31, 1873	6 2[illegible]
For quarter ended June 30, 1873	273 3[illegible]
For quarter ended September 30, 1873	597 7[illegible]
Total	962 4[illegible]

To the steamers of the White Star line:

For quarter ended December 31, 1872	$109 7[illegible]
For quarter ended March 31, 1873	53 6[illegible]
For quarter ended June 30, 1873	46 9[illegible]
For quarter ended September 30, 1873	77 4[illegible]
Total	287 5[illegible]

To the steamers of the Hamburg-American Packet Company:

For quarter ended December 31, 1872	$96 23
For quarter ended March 31, 1873	939 63
For quarter ended June 30, 1873	293 59
For quarter ended September 30, 1873	186 24
Total	1,515 69

To the steamers of the North German Lloyd, of Bremen:

For quarter ended March 31, 1873	$8 75
For quarter ended June 30, 1873	3 73
For quarter ended September 30, 1873	14 45
Total	26 93

J. J. MARTIN, *Auditor.*

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

No. 57.—*Balances due the United States on the adjustment of the postal accounts between the United States and Switzerland, for the quarters indicated, settlements made during the fiscal year ended June* 30, 1874.

Quarter ended September 30, 1873	$3,757 97
Quarter ended December 31, 1873	2,165 59
Quarter ended March 31, 1874	2,177 94
Quarter ended June 30, 1874	2,059 52
Total	10,161 02

Balances due the United States on the adjustment of the postal accounts between the United States and the Netherlands, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$1,108 49
Quarter ended December 31, 1873	1,200 18
Quarter ended March 31, 1874	1,162 47
Quarter ended June 30, 1874	1,134 45
Total	4,605 59

Balances due the United States on the adjustment of the postal accounts between the United States and Italy, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$619 30
Quarter ended December 31, 1873	1,136 66
Quarter ended March 31, 1874	1,607 93
Total	3,363 89

Balances due on the adjustment of the extranational postal accounts between the United States and Denmark, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.

Quarter ended June 30, 1873, balance due Denmark	$938 06	
Quarter ended September 30, 1873, balance due the United States		$75 02
Quarter ended December 31, 1873, balance due the United States		15 58
Quarter ended March 31, 1874, balance due Denmark	744 18	
Total balances due Denmark	1,682 24	
Total balances due the United States		90 60

Balances due from the United States to the Kingdom of Belgium, on the adjustment of the postal accounts between the United States and Belgium, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.

Quarter ended June 30, 1873	$1,978 16
Quarter ended September 30, 1873	1,971 40
Quarter ended December 31, 1873	2,194 62
Quarter ended March 31, 1874	2,425 95
Total	8,570 13

Balances due from the United States to the Empire of Germany, on the adjustment of the postal accounts between the United States and Germany, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.

Quarter ended June 30, 1873	$27,973 [illegible]
Quarter ended September 30, 1873	18,480 [illegible]
Quarter ended December 31, 1873	16,184 [illegible]
Quarter ended March 31, 1874	19,495 [illegible]
Total	82,134 [illegible]

Balances due from the United States to the United Kingdom of Great Britain and Ireland on the adjustment of the postal accounts between the United States and the United Kingdom, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.

Quarter ended December 31, 1872	$15,179 [illegible]
Quarter ended March 31, 1873	20,448 [illegible]
Quarter ended June 30, 1873	24,652 [illegible]
Quarter ended December 31, 1873	23,297 [illegible]
Total	83,572 [illegible]

Balances due from the United States to the Kingdom of Sweden, on the adjustment of the post accounts between the United States and Sweden, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$3,996 [illegible]
Quarter ended December 31, 1873	4,365 [illegible]
Quarter ended March 31, 1874	5,254 [illegible]
Total	13,616 [illegible]

Balance due from the United States to the Kingdom of Norway on the adjustment of the post account between the United States and Norway, for the quarter ended September 30, 1873 settlement made during the fiscal year ended June 30, 1874.

Quarter ended September 30, 1873	$51 [illegible]

J. J. MARTIN,
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY
FOR THE POST-OFFICE DEPARTMENT, *October* 10, 1874.

O

43D CONGRESS, 2d Session. } HOUSE OF REPRESENTATIVES. { Ex. DOC. No. 7.

ANNUAL REPORT

OF

THE ATTORNEY-GENERAL

FOR THE

FISCAL YEAR ENDING JUNE 30, 1874.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1874.

LETTER

FROM

THE ATTORNEY-GENERAL,

TRANSMITTING

His annual report for the fiscal year ending June 30, 1874.

DECEMBER 8, 1874.—Referred to the Committee on the Judiciary and ordered to be printed.

DEPARTMENT OF JUSTICE,
Washington, December 7, 1874.

SIR: I have the honor to transmit herewith my annual report for the fiscal year ending June 30, 1874.

Very respectfully, your obedient servant,

GEO. H. WILLIAMS,
Attorney-General.

Hon. JAMES G. BLAINE,
Speaker of the House of Representatives.

REPORT.

DEPARTMENT OF JUSTICE,
Washington, December 7, 1874.

o the Senate and House of Representatives of the United States of America in Congress assembled:

By the first section of the act of Congress entitled "An act to amend n act entitled 'An act to establish the Department of Justice, and for :her purposes,'" approved March 3, 1873, it becomes the duty of the .ttorney-General to submit at the commencement of each regular ses- on of Congress a report of the business of said Department for the receding fiscal year; and also a report of such other matters as he may eem proper, including a statement of the several appropriations placed nder the control of the Department, stating the amount appropriated, nd a detailed statement of the amounts used for defraying the expenses f the United States courts in each judicial district; also, the statistics f crime under the laws of the United States, and a statement of the umber of cases, civil and criminal, pending during the preceding year n each of the several courts of the United States.

Pursuant to these requirements of law, I have the honor to respectfully ubmit the following report of the operations of this Department for the scal year ending June 30, 1874.

CIVIL AND CRIMINAL SUITS.

Exhibits marked A, B, and C, show the amount of business transacted the courts of the United States in the several judicial districts.

Exhibit A is a statement of the number of civil suits to which the nited States was a party, pending in the circuit and district courts of ie United States on the 1st day of July, 1874, with the number of such uits terminated in said courts during the fiscal year ending June 30, 874.

Civil suits, to which the United States was a party, were pending July 1874, as follows: Customs suits, 3,772; internal-revenue suits, 2,014; ost-office suits, 135; miscellaneous suits, 933; making, in the aggregate, 854 civil suits pending on that day.

During the fiscal year ending June 30, 1874, there were terminated 058 civil suits; 1,133 of these were customs suits, 16 of which were ppealed from the district to the circuit court, and 12 from the circuit the Supreme Court; 978 were internal-revenue suits, 7 of which were ppealed from the district to the circuit court, and 10 from the circuit the Supreme Court; 109 were post-office suits, of which 1 was appealed om the circuit to the Supreme Court; 838 were miscellaneous suits, 7 which were appealed from the district to the circuit court, and 11 from e circuit to the Supreme Court.

The aggregate amount of judgments in favor of the United States in ese suits was $2,021,724.31, and the amount actually realized on these dgments during the last fiscal year was $867,192.18.

Exhibit B is a statement of the number of criminal cases pending in the United States courts July 1, 1874, with the number of such cases terminated in said courts during the last fiscal year.

There were pending on the 1st day of July, 1874, in the circuit and district courts of the United States 6,627 criminal prosecutions; 125 of these were for violations of the customs laws, 4,734 for violations of internal-revenue laws, 219 for violations of the post-office laws, 366 prosecutions under the enforcement acts, 13 under the naturalization laws, 93 for embezzlement, and 1,077 miscellaneous prosecutions.

Six thousand and eighteen criminal cases were terminated during the fiscal year ending the 30th of June last. Two hundred and two of these were prosecutions under the customs laws, in which there were 147 convictions, 8 acquittals, and 47 discontinuances; 3,291 under the internal-revenue laws, in which there were 1,641 convictions, 392 acquittals, and 1,258 discontinuances; 251 under the post-office laws, in which there were 168 convictions, 25 acquittals, and 58 discontinuances; 966 under the enforcement acts, in which there were 102 convictions, 92 acquittals, and 772 discontinuances; 1 under the naturalization laws, in which there was a conviction; 37 for embezzlement, in which there were 11 convictions, 4 acquittals, and 22 discontinuances; 1,270 were miscellaneous prosecutions, in which there were 553 convictions, 224 acquittals, and 493 discontinuances.

Exhibit C is a statement of the number of civil suits, to which the United States was not a party, commenced, and also those terminated, in the circuit and district courts of the United States during the fiscal year ending June 30, 1874.

It appears from this exhibit that a total of 19,194 suits of this kind were commenced during the year, of which 2,362 were cases in admiralty, 7,231 in bankruptcy, and 9,601 other suits of a miscellaneous character.

One thousand five hundred and fifty-two cases in admiralty, 3,703 in bankruptcy, and 6,235 miscellaneous cases, making a total of 11,490 cases of this kind, were terminated during the last fiscal year.

Judgments for plaintiffs in these cases were as follows: 1,115 judgments in admiralty suits, amounting to $962,074.40; 494 in bankruptcy suits, $30,203.55; 3,346 in other suits, $9,516,347.88; making a total of $10,508,625.83. Judgments for defendants were, 285 in admiralty, $29,215.01; 341 in bankruptcy, $24.30; 1,921 in other suits, $33,516.78; making a total of $62,756.09.

In 3,988 cases in which the United States was not a party, reported terminated, the result is not stated, while from some of the districts no reports of this character of cases have been received, and therefore the aggregate of cases and judgments included in this statement is much less than it would have been if full reports from all the districts had been obtained.

United States attorneys were called upon for this information, but the clerks, upon whom they relied for it, in some instances failed to furnish it, and I have no means of compelling clerks of the courts to make reports to United States attorneys or to this Department in such matters.

COURT EXPENSES.

Exhibit D shows the amount of funds advanced to the marshals of the United States for the several judicial districts during the fiscal year ending June 30, 1874, to defray the expenses of the courts of the United States, including fees of marshals, jurors, attorneys, clerks of the courts,

United States commissioners, special counsel, the expenses of maintaining prisoners, the expenses of the United States jail in this District, and for rent, furnishing court-rooms, and other miscellaneous expenses properly chargeable to this appropriation.

By this statement it appears that the amount advanced to marshals for court expenses, including their own fees and fees to jurors and witnesses, was $2,071,332.18; to the United States attorneys, their assistants, and substitutes, $275,476.90; to the clerks of the courts of the United States, $89,063.85; to United States commissioners, $75,830.10; for rent of court-rooms, $86,335.58; expenses of the United States jail in this District, $43,762.01; miscellaneous expenses, $27,930.19; the total expenditures, as shown in Exhibit D, $2,669,730.81, being $361,138.04 less in the aggregate than the expenditures for these purposes during the fiscal year ending June 30, 1873. There was $401,335.95 less advanced to the marshals for defraying the expenses of the courts, their own fees, and fees to jurors and witnesses, than for the fiscal year ending June 30, 1873.

It has been my constant aim to keep the expenses of the courts within the limits of the amount provided for that purpose by Congress, and during the last fiscal year I have, both by correspondence and personal interviews with the marshals and other officers of the courts, endeavored to impress upon them the necessity for the most rigid economy in the disbursement of the public funds, and have asked of them an earnest co-operation with the Department in the interests of economy; and it is gratifying for me to be able to present to Congress a statement so creditable to the officers throughout the country who by their exertions contributed so largely to this result.

There was on the 1st day of July last to the credit of the appropriation for the previous fiscal year $330,269.19. This balance is available for expenses incurred and services rendered during the fiscal year for which accounts had not been rendered until after the close of the year. Accounts have been presented since the first of July last amounting to $253,916.88, which were paid out of the balance, leaving on the day of the date of this report the sum of $76,352.31. The sum remaining, I think, will be sufficient to liquidate all claims that may hereafter be presented and which are properly chargeable to this appropriation.

SUPREME COURT.

Number of cases argued at October term, 1873, of the Supreme Court, in which the Government was interested	55
Of these there were decided in favor of the Government	32
Of these there were decided against the Government	19
Of these the court was equally divided in	1
Of these there remained undecided at the end of term	3
Cases dismissed in which Government was appellant or plaintiff in error	1
Cases dismissed in which Government was appellee or defendant in error	1
Cases reversed by consent in which Government was appellee or defendant in error, the point in them having been decided by previous cases	2

Twelve of the above cases were suits decided against the United States to establish title to land in Louisiana under the act of June 22, 1860, (12 Stat. at L., 85,) which required appeals to the Supreme Court by the

United States in all cases where the judgment below was in favor of the petitioner, and said appeals were taken only in consequence of this requirement.

THE COURT OF CLAIMS.

The following is a summary of the business before the Court of Claims during the last year:

Miscellaneous cases disposed of during the year	731
Cotton cases disposed of during the year	44
Total	775
Amount claimed in miscellaneous cases decided	$1,132,151 0[illegible]
Amount claimed in cotton cases decided	2,922,208 9[illegible]
Total amount claimed	4,054,359 9[illegible]
Amount awarded in miscellaneous cases	$652,442 7[illegible]
Amount awarded in cotton cases	1,766,361 9[illegible]
Total amount awarded	2,418,804 7[illegible]
Miscellaneous cases decided in favor of claimants	699
Miscellaneous cases decided in favor of defendants	32
Number of cases appealed to Supreme Court of the United States by claimants	14
Number of cases appealed to Supreme Court of the United States by defendants	1[illegible]
Total appealed	24
Cotton cases decided in favor of claimants	41
Cotton cases decided in favor of defendants	[illegible]
Number of cases pending at the beginning of the year	4,[illegible]
Number of cases brought during the year	1,9[illegible]
Total	6,7[illegible]
Disposed of during the year	[illegible]
Still pending	6,9[illegible]

Of the 1,985 suits brought during the year, 1,114 are suits by employés of the Government to recover the difference in their daily wages between eight hours' and ten hours' labor. Two hundred and twenty-four of the cases brought during the year are claims by postmasters and ex-postmasters for additional compensation under the provisions of the acts of July 1, 1864, (13 Stats. at L., 335,) and June 8, 1872. (17 Stats. at L., 283.) Forty of these cases are suits for the refunding of money collected by the Internal-Revenue Department. Four hundred and eighty-nine are cotton cases. Forty-two are miscellaneous. In 66 of the cases no printed petition has yet been received, and the nature of the claim is not known. Many of these cases may be grouped in classes, and the decision of one of each class in which the facts are similar, and the principles of law are identical, will determine all the others involving the same principles of law and the same state of facts.

There should be some legislation modifying the twelfth section of the act of March, 1863, relating to the affidavit to be filed in support of the petition of claimant. As the law now stands, verification by the affi[illegible]

vit of the claimant, or his agent or attorney, that he believes the facts stated in the petition to be true is sufficient. Many petitions are filed verified by the affidavits of claim-agents or other persons who cannot possibly have any knowledge beyond hearsay of the facts which they swear they believe to be true.

It is certainly not asking too much of any person who has a claim against the Government that he should state it distinctly and swear to it with certainty; or, if it is impossible for the claimant to make the verification, then the agent should state that the allegations in the petition are true of his own knowledge, except such matters or acts as are therein stated to be upon information and belief, and as to such matters he believes the statements to be true.

Neither the commissioners of the Court of Claims, nor the court itself, can now enforce the attendance of witnesses for examination. Much testimony is lost to the Government by this want of power. The United States district courts should have authority to issue subpœnas directing attendance before commissioners of the Court of Claims, and be given power to punish as for contempt any failure to obey the command.

Many of the rebel records and archives are now in the possession of the Government, and would furnish much valuable evidence to defeat excessive and unjust claims, if they could be used. The heads of Departments having their custody should have authority to properly certify them as the records of other Departments are now certified, and they should be competent evidence, their credibility and conclusiveness to be determined by the judges from all the facts and proofs in the case.

APPROPRIATIONS.

The following statement shows the expenditures made during the fiscal year ending June 30, 1874, from the various appropriations made by Congress and placed under the control of this Department. It will be seen that all the appropriations have been sufficient for the purposes for which they were made, and in some instances unexpended balances remain to their credit.

Exhibit showing the expenditures made during the fiscal year ending June 30, 1874, from the various appropriations made by Congress and placed under the control of this Department.

Expenses of United States courts:	
Appropriation	$3,000,000 00
Amount expended	2,669,730 81
Balance	330,269 19
Salaries in the Department:	
Appropriation	$112,320 00
Appropriation, act June 22, 1874	417 00
	112,737 00
Amount expended	110,989 87
Balance	1,747 13
Contingent expenses:	
Amount appropriated	$21,000 00
Amount expended	21,000 00

Postage:	
Appropriation	$15,000 00
Amount expended	5,890 00
Balance	9,110 00
Salary of the warden of the jail in the District of Columbia:	
Appropriation	$2,000 00
Amount expended	2,000 00
Support of convicts transferred from the District of Columbia:	
Appropriation	$10,000 00
Amount expended	6,177 26
Balance	3,822 74
Prosecution of crimes:	
Appropriation	$50,000 00
Amount expended	43,024 50
Balance	6,975 50
Defending claims under convention with Mexico:	
Appropriation	$10,000 00
Amount expended	1,100 00
Balance	8,900 00
Prosecution and collection of claims due the United States:	
Appropriation	$15,000 00
Amount expended	2,490 97
Balance	12,509 03
Defending claims for seizure of captured and abandoned property:	
Appropriation	$30,000 00
Amount expended	30,000 00
Punishing violations of intercourse acts and frauds:	
Appropriation	$10,000 00
Amount expended	6,897 75
Balance	3,102 25
Repairs to City Hall, Washington, D. C.:	
Appropriation	$2,500 00
Amount expended	2,500 00
Salaries and expenses of commissioners to codify the laws:	
Appropriation	$12,000 00
Appropriation act June 22, 1874	3,175 03
	15,175 03
Amount expended	12,000 00
Balance	3,175 03
Salaries and expenses of metropolitan police:	
Appropriation	$207,530 00
Amount expended	204,500 00
Balance	3,030 00
Rent of building:	
Appropriation	$17,000 00
Amount expended	16,999 99
Balance	01

Current expenses of the Reform-School of the District of Columbia:	
Appropriation	$9,040 00
Amount expended	7,646 79
Balance	1,393 21
Purchase of Supreme Court Reports:	
Appropriation	$12,500 00
Amount expended	12,500 00
Payment of expenses and emoluments for United States marshal of Utah:	
Appropriation	$20,000 00
Amount expended	18,991 14
Balance	1,008 86

DISTRIBUTION OF DOCUMENTS.

This Department is charged by law with the distribution of the Statutes at Large and Supreme Court Reports to the officers of the courts of the United States, and the Secretary of State and the Secretary of the Interior are required to furnish these books to this Department, from time to time, as they may be published.

In compliance with law, the Secretary of the Interior has furnished 408 copies of volumes 13, 14, 15, 16, 17, and 18 of Wallace's Supreme Court Reports. Of these there have been distributed to the officers of the courts 367 copies.

The Secretary of State has furnished 425 copies of the Pamphlet Laws of the first session of the Forty-third Congress, of which there have been distributed to the officers of the courts 369 copies.

UNITED STATES JAIL.

In accordance with the provisions of the act of March 5, 1872, the warden of the United States jail in this District has submitted his report for the year ending the 31st day of October, 1874. The report gives a synopsis of the expenses of the jail during the year, the daily average of the number of prisoners, the offenses for which they were committed, and their disposition.

The total number of prisoners during the year was 1,810. At the beginning of the year there were 104 males and 14 females in the jail. The daily average was 161, being an increase of the average over last year of 31. Of the number committed during the year 1,639 were males and 171 females. There were released during the year 1,496 males and 168 females, leaving in the jail at the close of the year 158 prisoners. There were sent to the penitentiary at Albany 48 males and 2 females; to the Reform-School of this District, 42. One was executed, one died, and twelve were pardoned by the President. Six hundred and sixty-two were committed on the charge of petit larceny and 521 on the charge of assault and battery, seven for murder, and the others for various causes, as stated by the warden. A statement of those tried, convicted, and sentenced is submitted by the warden.

The expenses during the year were: For supplies, salaries of physician, guards, and employés, $23,580.57; subsistence of prisoners, $11,814.53; beds, bedding, and clothing, $874.87; fuel, lights, gas-fitting, sewerage, &c., $2,541.84; furniture, stoves, and other miscellaneous items, $725.19; repairs, and expenses of execution, $511.77; medicines, lime, and other disinfectants, ice, and miscellaneous articles, $1,376.02; trans-

portation of convicts to Albany, $1,501.54; the aggregate expenses for the year amounting to $44,854.33, being an increase over the expenditures for these purposes during the previous year of $3,791.31. This increased expense arises from several causes: first, from the increased number of prisoners. During the previous year there were committed to the jail 1,577, being 233 less than for the current year. It was also necessary to increase the number of guards, which was necessitated by the crowded condition of the jail and its great insecurity.

No escapes have occurred during the year, nor since the present warden has had charge. As has been customary since the jail was placed under the direction and control of this Department, I have directed an officer to occasionally visit it and make a thorough inspection of the food and clothing provided for the prisoners. The food, I am informed, is wholesome and abundant, and clothing is issued to those in actual need of it. Owing to the strict sanitary precautions used, no sickness of any consequence has occurred during the year, indicating vigilance and care on the part of the officers and employés.

In my last annual report I had the honor to invite the attention of Congress to the propriety of making some provision for the employment of those sentenced to imprisonment in the jail, and I again respectfully invite the attention of Congress to this object, and particularly to what is said in relation thereto by the warden in his report.

METROPOLITAN POLICE.

Pursuant to the act of Congress of March 3, 1873, the board of metropolitan police have submitted their annual report to this Department for the year ending the 30th of September, 1874.

It will be perceived from an examination of the report that the regular force is made up as follows: 1 major and superintendent, 1 captain and inspector, 10 lieutenants, 20 sergeants, 200 privates or patrolmen, 6 detectives.

Pursuant to law, there are also in the employment of the board the following officers: 1 secretary of the board, 1 property clerk, 3 clerks, 3 surgeons, 1 major, and 9 laborers. There are also under commission 73 persons as additional privates to do duty in various localities at the expense of the parties making the application for their appointment: making an aggregate of 256. There are detailed for duty at the central office or headquarters, 1 major and superintendent, 1 captain and inspector, 1 lieutenant, (as hack-inspector,) 6 detectives, 1 lieutenant, and 4 privates as sanitary officers.

The District of Columbia is divided into eight precincts, to each of which are assigned 1 lieutenant, from 2 to 3 sergeants, and from 20 to 30 privates. Twenty-six members are detailed to special duty, as follows: 3 at the Executive Mansion, 2 at the police court, 2 at the railroad depots, 3 at police headquarters, as telegraph operators, &c., and 16 at the various station-houses. In the enforcement of discipline and efficiency, charges have been prepared and trials accorded in 94 cases, resulting as follows: 7 dismissals; 1 dropped from the rolls; 1 reduced to the ranks; 20 reprimanded; 8 fined; 10 cautioned, but complaint dismissed; 47 complaints dismissed. A very satisfactory state of efficiency is reported by the board during the year. There has been expended in the maintenance of the force during the fiscal year ending June 30 last the sum of $204,976.62, as appears from the statement of the disbursing officer of this Department who disbursed that appropria-

tion during said fiscal year, which is appended to the report of the board.

I invite attention to the operations of the detective corps attached to this force. These officers have an arduous, responsible, and, in many cases, a delicate duty to perform. The board report that they have performed their duties in a satisfactory manner. Much valuable property has been recovered and restored to the owners. Considerable success has been met with in their endeavors to ferret out criminals and in furnishing evidence for their conviction and punishment. The following is a synopsis of the work performed by them during the year, as far as it could be made a matter of record. A large part of the service of these officers is necessarily of such a character that a report of them cannot be made. The number of robberies reported is 895; arrests made, 512; amount of property reported lost or stolen, $29,411.49; the amount of property recovered, $35,945.89; the amount of property turned over to the property-clerk, $10,165; the amount of property turned over to owners, $25,789.89; the amount of property taken from persons and returned to the same, $2,867.02. The amount of property recovered being greater than that reported lost or stolen is accounted for from the fact that frequently property is recovered before it is reported lost or stolen.

The board has renewed the lines of telegraph throughout the entire District, which was rendered necessary on account of the old line, which has been in use nearly twelve years, becoming corroded and unreliable. These wires now extend to Tenallytown, Brightwood, the Reform-School, and Benning's Station, across the Eastern Branch of the Potomac, covering all the important objective points within the District. The wires were formerly attached to chimneys and roofs of houses, but are now placed upon poles erected for the purpose. This telegraph is a great auxiliary to the force in sending and receiving information. I respectfully invite attention to the statement of the work performed by it, attached to the report of the board.

Under the provisions of the third section of the act of Congress approved July 23, 1866, the board has received and considered 419 applications for the approval of licenses for the retail sale of liquors, and disposed of them by approving of 320, disapproving 99. The number of applications for this purpose is one more than last year; the number approved is 51 less than last year; the number disapproved is 52 more than last year, and the number of transfers approved is 22 less than last year.

I invited attention in my last annual report to the suggestions of the board in regard to the sale of liquor in the District, and to the necessity for more stringent and effective laws for the punishment of persons engaged in this traffic without the proper license. I again respectfully invite attention to the remarks of the board upon this subject contained in their present report. I think it necessary that some additional legislation should be had which will more effectually break up this illicit traffic.

I also invite attention to the report of the property-clerk, which accompanies the report of the board, and to the suggestions as to the legal disposition of property waifs. It appears from the report of the property-clerk that there were received at his office during the year property valued at $19,827.69, and there was delivered to claimants, on order of court and other evidence of ownership, property amounting to $17,393.33. The entire property operations of the police force, other than that which came through the office of the property-clerk, amount to the sum of $132,201.33, making an aggregate of

$152,028.92, of which property to the value of $149,594.56 was restored to claimants, leaving property to the value of $2,434.36 undisposed of.

The board of health having, under the authority of Congress, special charge of the sanitary condition of the District, comparatively little has been done in that line by the police force; only one private has been engaged in this kind of duty.

The whole number of arrests made during the year by the force has been 13,192, of which 11,122 were males, 2,070 were females; 4,832 were married, and 8,360 were single; 8,361 could read and write, and 4,831 could not read and write. There were 7,592 males and 1,557 females charged with offenses against persons, and 3,530 males and 513 females charged with offenses against property. Of the cases reported, 4,945 were dismissed, 17 turned over to the military, 1,298 sent to jail for court, 127 gave bail for court, 1,470 were sent to the work-house, 261 gave securities to keep the peace, 50 were sent to the Reform-School. 85 not disposed of, and in 1,310 cases various light punishments have been inflicted. Fines have been imposed in 3,629 cases, amounting in the aggregate to $37,248.25, as follows: in District of Columbia cases, $14,816.50; in United States cases, $7,145.75. District of Columbia cases amounting to $11,126 were appealed from; United States cases amounting to $4,160 were appealed from.

For further and more detailed reports of the working of the force generally, I respectfully refer to the various tables and other statements accompanying the report.

I desire to invite particular attention to the necessity for the increase of this force. Owing to the increase in the population, the force as now organized is entirely inadequate. After deducting the various details from the 200 privates, the number now allowed by law, there are remaining but 174 for regular patrol duty. According to the population of the District, as shown by the census of 1870, there is an average of one policeman to each 750 inhabitants, which, on account of the width of the streets, and many sparsely settled sections of the District, is wholly inadequate. The population of the District has very much increased since 1870, and it is estimated that now there is actually but one private for from 900 to 1,000 inhabitants. The board recommends that the patrol force be increased to at least 400 men; and I invite attention to their arguments and statements in support of their recommendations. Whilst not recommending any particular number, I think the force should be materially increased.

In my last annual report I invited the attention of Congress to the unhealthy, insecure, and disgraceful condition of the station-houses provided by the District authorities. Two of them, it appears from the report of the board, have been condemned by the board of health as nuisances, and dangerous to life and health. Some of them are so ill adapted to the purposes for which they were erected that the board has been compelled to dispense with the reserve force for the precinct in which they are located, because the health of the men stationed there became seriously impaired. The efficiency and discipline of the force has been greatly damaged by the want of proper station-houses and accommodations; and those who are unfortunate enough to be obliged to seek a night's lodging at such places, as well as those who may be arrested, are in danger by being confined in the filthy places attached to most of the stations.

I would respectfully recommend that Congress make a suitable appropriation for the cleaning and repair of the present station-houses, and for the erection of such others as may be necessary.

REFORM-SCHOOL.

I have the honor to submit herewith the reports of the president, superintendent, and physician of the Reform-School of the District of Columbia. It appears from the report of the superintendent that there were remaining in the institution on the 1st day of November, 1873, 113 boys. There have been received during the year 67 boys. The whole number in the institution during the year was 180. Twenty-seven were discharged, 2 escaped, and 151 were remaining on the 1st ultimo. The ages of the boys average from eight to eighteen years. Thirty-nine were native and 28 were of foreign parentage. Forty were committed by the police court, and 27 by the board of trustees. The expenses of the institution during the year ending the 1st of November, 1874, were $26,478.53. There was realized from the products of the garden, $845.80; from the farm and orchard, $1,312; and from the workshop, $1,233.93.

The buildings have all been completed within the year, provided with gas and the necessary heating-apparatus. The grounds around the buildings have been partially laid out, and fruit and ornamental trees ordered to be set out this fall and the coming spring. The report as to the condition of the school is quite satisfactory. The progress of education among the boys, as the president reports, is eminently gratifying. They perform their labor on the farm, in the garden, and the workshop with cheerfulness and industry, and their present condition, when contrasted with their former mode of living, is in every point of view a great improvement. Religious services are held on the Sabbath day. The main object of their education is to infuse into their minds correct principles of morals and religion and just ideas of right and wrong.

It is noticeable that so few attempts to escape have been made. The grounds are merely inclosed by the fence which existed on the farm for years prior to its having been purchased for its present purposes. The boys work in the fields with only their teacher, or the farmer or gardener, with them; no guards are required. This speaks well for the kindness and consideration shown to them by the officers of the institution.

Attention is invited to the estimates of appropriations submitted to Congress for this institution. The board of trustees think it very desirable to purchase the remainder of the farm, consisting of about 120 acres, and have submitted an estimate for this purpose of $12,000. They have also submitted estimates for erecting another family building, $16,000; for workshops, steam-engine, &c., $11,000; and for fencing and hedging, $5,000. The health of the inmates has been unusually good. Few cases required medical treatment, and those of a mild form of miasmatic origin. No deaths have occurred during the year.

I take pleasure in commending this institution to the favorable consideration of Congress. I think its results have proved its value to the community. Boys who heretofore were committed to the workhouses or the jail to associate with old and hardened criminals, from whom they received all the corrupt influences of long lives spent in vice and crime, are now removed from such influences by being placed in this institution, where they are taught to lead lives of industry and usefulness.

An estimate is submitted for a salary to be paid the present president of the school. He has devoted nearly all his time for some years to this institution, and to him, in a great measure, is the credit of the present admirable condition of the school due. I commend this estimate to the favorable attention of Congress.

By the act of June 22, 1874, making appropriations to supply deficien-

cies in the appropriations for the services of the Government for the fiscal years ending June 30, 1873 and 1874, an appropriation of $31,772.29 was made "to re-imburse the fund of the Reform-School in the District of Columbia for work done and materials furnished in the erection and furnishing of the buildings and grounds for the same;" and the Attorney-General was directed to take such measures as should be most effectual to enforce any right or claim which the United States have to the amount of money or any part thereof now involved in the bankruptcy of Henry D. Cooke and of Jay Cooke & Co., the same having been in the hands of said Henry D. Cooke as treasurer of said Reform-School at the time of his bankruptcy, and being then moneys belonging to the United States; and to inquire into this loss of the public moneys and ascertain who is responsible therefor, and institute such prosecutions as public justice may require, and report his proceedings therein to Congress in his next annual report.

I have corresponded with the Secretary of the Interior, the accounting officers of the Treasury, the president of the Reform-School, and Henry D. Cooke upon this subject. It appears that the balance of said funds remaining unexpended at the time of Mr. Cooke's bankruptcy was $18,386.58. This amount was on deposit with Jay Cooke & Co. The trustees of the school hold a bond from Mr. Cooke, with sureties for the sum of $5,000, which is believed to be good. Mr. Cooke takes the ground that, as treasurer of the Reform-School, the moneys appropriated therefor by Congress and deposited with him were not moneys of the United States, but of the corporation of which he was an officer, and claims that this is the view of the accounting officers of the Treasury. Suitable steps have been taken to obtain the amount of said indebtedness, if possible, from the bankruptcy proceedings against Jay Cooke & Co., in Philadelphia.

TERRITORIAL PENITENTIARIES.

By the act of June 20, 1874, entitled "An act to amend an act transferring the control of certain territorial penitentiaries to the several Territories in which the same are located," approved January 24, 1873, it is provided that the penitentiaries in the Territories of Montana, Idaho, and Wyoming shall continue under the care and control of the marshals of the United States for said Territories.

The penitentiaries in Montana and Colorado had been, pursuant to the act of January 24, 1873, transferred to the custody and control of the proper authorities of said Territories. This latter act repealed so much of the act of January 10, 1871, placing the penitentiaries in the Territories of Montana, Idaho, Wyoming, and Colorado under the care and control of the marshals of said Territories, and transferred the care and custody of said penitentiaries, the personal property thereunto belonging, and the use and occupation thereof, to said Territories until otherwise ordered by the Attorney-General. No provision had been made by the legislatures of Idaho and Wyoming to receive these penitentiaries, and, in the absence of such legislation, the governors of these Territories were unable to receive the transfer, and therefore the marshals were required to continue the care and custody of the penitentiaries until the proper legislation had been had by the Territories. The act of June 20, 1874, having repealed so much of the act of January 24, 1873, transferring the care and custody of the penitentiaries in the Territories of Montana, Idaho, and Wyoming to said Territories, the penitentiary in Montana has been again taken charge of by the

marshal of that Territory, and those in Idaho and Wyoming continue in the charge of the marshals respectively of those Territories.

Congress at its last session appropriated the sum of $6,020 for completing fourteen cells, with iron steps and galleries, in the penitentiary of Montana. A contract has been made by the Department for this work; and I am informed by the marshal that the contractor has delivered upon the premises the material for the construction of these cells, and that the work is commenced. It is expected that these cells will be completed within the time specified in the contract.

Congress also appropriated $7,271 to place the penitentiary of Washington Territory in a suitable condition for the reception and confinement of convicts. The marshal is having the work done, under the direction of this Department; and it is expected that the building will be placed in a proper condition for the confinement of prisoners at an early day.

ASSISTANTS TO THE UNITED STATES ATTORNEYS, ETC.

By the act of April 10, 1869, the Attorney-General was required to report to Congress annually the names of all persons employed as assistants to the attorneys of the United States, the business upon which they are engaged, and their compensation; and in compliance with that law I submit the following statement marked Exhibit E.

COMPENSATION OF DISTRICT ATTORNEYS AND MARSHALS.

I respectfully renew what I said in my last annual report, as follows

I beg to direct the attention of Congress to the mode of compensating district attorneys and marshals for their services. They are now paid respectively $200 salary per annum and fees. I think they should be wholly paid by salaries, and all fees, so far as they are chargeable to the United States, should be abolished. These officers, as well as clerks and commissioners, are now directly interested in multiplying the number of prosecutions, and I am satisfied that the Government is subjected to unnecessary expense in consequence of this state of things. Frivolous and vexatious prosecutions ought to be avoided as far as practicable, for considerations that relate to the citizen as well as to the Government. By reference to another part of this report, it will be seen that the salaries of assistant district attorneys are fixed by the Attorney-General, ranging from $750 to $5,000 per annum. Making $6,000 the maximum, as it now is, the salaries of district attorneys might be graduated by the same authority, according to the responsibilities and labor of each officer.

District attorneys, in addition to the prosecution and defense of suits in which the United States are concerned, for which fees are established by law, are required to defend suits brought against officers of the Government for acts done in their official capacity, to examine titles to sites for public buildings, and perform a variety of duties for which they receive extra compensation, to be determined by the Attorney-General. These extra allowances would be unnecessary if they were wholly paid by salaries. Fifty dollars is the highest fee now allowed by law in any case to which the United States are a party, and not unfrequently district attorneys for this small amount are required to conduct a suit where the opposing counsel receives five or ten thousand dollars for their services. I am convinced that the proposed change would be of advantage in every point of view.

PENITENTIARY IN THE DISTRICT OF COLUMBIA.

I desire to renew my recommendations made in my last annual report as to the necessity for a penitentiary in this District. At present all convicts sentenced here to imprisonment and hard labor are, under existing contracts, transferred to the penitentiary at Albany, and those convicted in States where there are no suitable penitentiaries for the confinement of United States convicts are also chiefly sent to this insti-

tution. I am informed that without great expense the building in course of erection for a jail in this city could be used as a penitentiary, there being, as I learn, ample room for work-shops and other conveniences necessary to such an institution. This building is not yet completed, and any alterations in its construction that may be necessary can, I understand, easily be made.

I respectfully submit, therefore, to Congress the propriety of making such additional appropriation as may be necessary to carry this plan into execution.

JURORS IN THE UNITED STATES COURTS.

In my last annual report I invited attention to the manner in which jurors to serve in the courts of the United States are now drawn, and take the liberty of repeating what I then said, which is as follows:

Jurors to serve in the courts of the United States are now summoned and designated according to the mode practiced for the formation of juries in the courts of the several States. There is no uniformity in this practice, and in many of the States writs of venire are issued by the clerks of the United States courts to the marshals, authorizing them to select such persons as they choose for jurors in such courts. Complaints are made of abuses under this system. Marshals may be induced to summon jurors with a view to pending suits or the granting of personal favors, and in this way influences may be made to operate, which ought, as far as possible, to be excluded from the jury-box. I would respectfully suggest that an act be passed providing a uniform mode of obtaining jurors for the United States courts, the main idea of which should be that the names of a large number of the best-qualified persons residing in the different parts of the district should be returned to the clerks by commissioners or other persons to be designated by the courts for that purpose, and from them, at each term, should be drawn by lot the names of the number of persons necessary to constitute the grand and petit juries for that term. Various provisions of law will, of course, be necessary to give effect to this idea. And I would further suggest that so much of the acts of Congress requiring jurors in the United States courts to possess the qualifications fixed by the laws of the State for jurors in the State court be abolished, as by virtue thereof persons otherwise competent are disqualified as jurors on the ground of color.

CRIMINAL PROSECUTIONS.

As a means of expediting the trial of persons charged with crime against the laws of the United States, and diminishing the expenses in relation thereto, in my last annual report I invited the attention of Congress to the propriety of some legislation looking to the trial of persons charged with minor offenses by information filed by the district attorney, instead of the present cumbrous, dilatory, and expensive mode of presentment or indictment by a grand jury. Much of the time of grand juries is now taken up with the investigation of acts which are in themselves mere misdemeanors, thus incurring a large expense by the Government, a great part of which could be saved by the filing of an information by the district attorney without the intervention of the grand jury.

I respectfully invite attention to this subject and to my remarks made in relation to it in my last annual report.

AMENDMENT TO THE LAWS RELATING TO THE SETTLEMENT OF ACCOUNTS OF MARSHALS OF THE UNITED STATES.

Several measures were reported by the committee on expenditures in this Department to the House, looking to a reduction of expenditures and holding the officers of the Department charged with disbursements of the public funds to a more rigid accountability; but I regret to say that, owing to the great pressure of other business, these measures were

overlooked, and failed to receive that consideration which I think they justly deserved.

I desire specially to again invite the attention of Congress to House bill No. 3580, introduced by the chairman of the committee referred to, which was to amend the twenty-third paragraph of section 3 of the act entitled "An act to regulate the fees and costs to be allowed clerks, marshals, and attorneys of the circuit and district courts of the United States, and for other purposes," approved February 26, 1853. I think, with some amendments, the provisions of this bill, if it becomes a law, would exert a restraining influence and a wholesome check upon any officer of the Department who may be inclined to be either careless or extravagant in his expenditures.

CLERKS OF COURTS.

A bill was introduced by the chairman of the committee on expenditures in this Department, at the last session of Congress, to which I respectfully invite attention. It is House bill No. 3578, to amend an act to establish the judicial courts of the United States, approved September 24, 1789, in relation to the bonds of the clerks of the courts of the United States. This bill required the clerks to give bond, with sufficient sureties, to be approved by the court for which they are appointed, to the United States in the sum of not less than $5,000, nor more than $20,000, to be determined by the Attorney-General, and also provides the mode and manner in which such requirement of the Attorney-General may be enforced.

In many districts the clerks give a bond in the nominal sum of $2,000, oftentimes with doubtful securities. Some of these clerks receive thousands of dollars annually, belonging to the Government and litigants, and the bonds they are now required to give are no sufficient security, either to the Government or individuals.

A great difficulty exists in obtaining prompt returns, as required by law, of the fees and emoluments of some of the clerks of the courts. I submitted to the chairman of the committee on expenditures in this Department a draught of a bill, which I think, if passed, would cure this evil, which is as follows:

That if the clerk of any court of the United States shall neglect for one year to render to the Department of Justice any return of the fees and emoluments of his office, the Attorney-General shall notify the judge of the court of this fact, and unless the clerk, within sixty days thereafter, makes explanation of the delay satisfactory to the Attorney-General, it shall be the duty of said judge to remove the clerk from office. That the circuit courts of the United States, for the purposes of this act, shall have power to award the writ of mandamus, according to the course of the common law, upon motion of the Attorney-General or district attorney of the United States, to any officer thereof to compel him to make the returns and perform the duties herein required.

UTAH TERRITORY.

I desire to invite the attention of Congress to the necessity for additional legislation in and for the Territory of Utah. By the act of June 3, 1874, entitled "An act in relation to courts and judicial officers in the Territory of Utah," it is made the duty of the marshal to execute all writs and processes issued out of the courts. Provision is made for costs in civil cases; but the only provision for the costs and expenses of making arrests, holding and subsisting prisoners, and for the prosecution of crimes committed against the laws of the Territory is, "that the costs and expenses of all prosecutions for offenses against any law

of the territorial legislature shall be paid out of the treasury of the Territory." But Congress has made no provision by which the treasury of the Territory can be reached. I have received a number of communications from the marshal asking what he is to do in the premises.

No appropriation was made by the territorial legislature at its last session to meet the expenses of a large part of such criminal business; and without funds the marshal is unable to serve the process of the courts or arrest and keep in confinement those whose cases are not bailable or who are unable to give the required bail.

I have no authority under the law to advance funds to the marshal out of appropriations under my control for defraying expenses incurred in the arrest and keeping of persons charged with violations of the territorial laws of Utah. In the present condition of affairs, it is not probable that the legislature will make provision for such expenses.

I respectfully invite the early attention of Congress to this important subject, with the request that some additional legislation to cure this defect in the law be had at an early day.

MILEAGE TO THE OFFICERS OF THE COURTS.

I desire to invite the special attention of Congress to the proviso in the Army appropriation bill of June 16, 1874, (Laws of the first session of the Forty-third Congress, page 72,) providing "that only actual traveling expenses shall be allowed to any person holding employment or appointment under the United States; and all allowance for mileage and transportation in excess of the amount actually paid is hereby declared illegal, and no credit shall be allowed to any of the disbursing officers of the United States for payment of allowance in violation of this provision."

When the bill was pending in the House, I had the honor to invite the attention of the Appropriation Committee to this provision, and to state wherein it would work a great hardship to the marshals and other officers of the courts of the United States whose compensations were made up of fees, and whose receipts on account of travel made up the major part of such fees, and asked that this proviso be so modified as not to apply to those officers, as I was apprehensive that it would be difficult to find suitable persons to perform the duties of the offices with this law in force. I also invited the attention of the Judiciary Committee of the Senate to the same subject, and informed it that, in my opinion, this provision would greatly embarrass and cripple the executive branch of the courts.

The salaries of the marshals and district attorneys are merely the nominal sum of $200 per annum, and their compensation otherwise is made up of fees. The marshals are often obliged to travel hundreds of miles to serve process, and the only compensation therefor previous to the passage of the law referred to was their mileage and $2 for service of original process and 50 cents for subpœna. Now that mileage is no longer allowable, all they can receive for such service is $2 for original process, 50 cents for subpœna, and their actual expenses; and for the time so employed they receive nothing.

District attorneys are also compelled to travel long distances to attend upon the preliminary examinations before commissioners, or the regular term of the court, for which they formerly received, in addition to the *per diem* and other allowances provided by law, mileage, and in many instances this compensation was inadequate.

Since the adjournment of Congress, a number of the best marshals and

district attorneys have informed me personally that with this law remaining on the books it would be impossible for them to hold their offices or to employ proper persons to act as deputies and assistants.

I may say that the entire compensation of deputy marshals was made up from the mileage allowed; and now that this is taken from them, they can only receive, in addition to their actual expenses, the trifling amount allowed for serving process, and where no service is made, as is frequently the case, they receive nothing. I stated to the officers who called upon me that I would invite the attention of Congress to this law, and urge its modification or repeal so far as it relates to the officers of the courts; and I earnestly hope that early action to this end will be taken by Congress.

I would also recommend additional legislation for the protection of officers of the United States in the performance of their duties.

I think that jurisdiction should be given to the Federal courts to hear and determine prosecutions against those who assault or murder officers of the General Government on account of their official actions.

GEO. H. WILLIAMS,
Attorney-General.

EXHIBIT A.—*Statement showing the number of civil suits, to which the United States was a 1874, with the number terminated during*

Districts.	Civil suits, to which the United States was a party, pending July 1, 1874.					Civil suits, to which the United States was a party, terminated during the fiscal year ending June 30, 1874.						
	Customs suits.	Internal-revenue suits.	Post-office suits.	Miscellaneous suits.	Total.	Customs suits.	Internal-revenue suits.	Post-office suits.	Miscellaneous suits.	Total.	Customs suits.	
											Judgment for United States.	Judgment for defendant.
Alabama, northern district	.....	54	9	.....	63	.....	.....	.....	.....	.....	.....	.....
Alabama, middle district	.....	6	13	.....	19	.....	.....	.....	11	11	..	...
Alabama, southern district	1	2	1	2	6	1	.....	.....	3	4	1	...
Arkansas, eastern district	.....	4	1	3	8	.....	6	.....	22	28	.....	.....
Arkansas, western district	.....	.....	1	100	101	.....	1	1	2	4	.....	.....
California	30	14	12	22	78	6	15	.....	1	22	5	....
Connecticut	1	7	.....	3	11	5	6	2	.....	13	1	1
Delaware	6	1	1	2	10	.....	1	.....	.....	1	.....	.....
Florida, northern district	7	9	7	7	30	3	.....	8	.....	11	2	.....
Florida, southern district	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....
Georgia, northern district	.....	19	3	.....	22	.....	84	7	1	92	.....	.....
Georgia, southern district	.....	8	2	.....	10	1	7	2	13	23	.....	.....
Illinois, northern district	.....	25	2	1	28	1	19	.....	.....	20	.....	.....
Illinois, southern district	.....	17	.....	5	22	.....	20	3	1	24	.....	.....
Indiana	.....	5	2	.....	7	.....	20	1	6	27	.....	.....
Iowa	.....	9	2	6	17	.....	12	3	3	18	.....	.....
Kansas	.....	2	3	12	17	.....	1	9	5	15	.....	.....
Kentucky	.....	15	.....	.....	15	.....	117	2	.....	119	.....	.....
Louisiana	39	55	4	2	100	38	4	4	4	50	27	6
Maine	18	1	1	2	22	3	2	.....	4	9	3	...
Maryland	4	9	2	16	31	2	12	.....	102	116	1	...
Massachusetts	129	90	2	16	237	56	15	1	9	81	9	...
Michigan, eastern district	.....	.....	.....	.....	.....	13	.....	.....	4	17	11	...
Michigan, western district	.....	.....	.....	8	8	.....	.....	.....	1	1	.....	.....
Minnesota	.....	10	4	4	18	.....	3	1	.....	4	.....	.....
Mississippi, northern district	.....	20	1	8	29	.....	11	6	2	19	.....	...
Mississippi, southern district	.....	2	2	.....	4	1	9	7	8	25	1	...
Missouri, eastern district	.....	21	.....	13	34	4	14	.....	20	38	1	1
Missouri, western district	.....	4	3	1	8	.....	2	2	13	17	.....	.....
Nebraska	.....	6	.....	.....	6	.....	1	.....	.....	1	.....	.....
Nevada*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire	.....	1	.....	1	2	.....	.....	.....	4	4	.....	.....
New Jersey	33	3	1	4	41	5	7	1	2	15	4	1
New York, northern district	11	26	1	24	62	12	7	2	40	61	2	...
New York, southern district	3,398	714	8	200	4,320	934	60	2	40	1,036	179	64
New York, eastern district	4	55	.....	25	84	7	32	.....	36	75	6	....
North Carolina, eastern district	.....	11	1	2	14	1	15	4	25	45	.....	1
North Carolina, western district	.....	69	1	37	107	.....	36	2	.....	38	.....	.....
Ohio, northern district	.....	17	.....	4	21	2	8	.....	.....	10	1	..
Ohio, southern district	.....	7	1	9	17	.....	21	3	16	40	.....	...
Oregon	.....	.....	.....	4	4	.....	.....	1	.....	1	.....	.....
Pennsylvania, eastern district	51	211	5	59	326	15	24	.....	4	43	1	.
Pennsylvania, western district	2	88	18	21	129	.....	17	10	5	32	.....	.....
Rhode Island	2	3	.....	1	6	1	.....	.....	2	3	.....	.....
South Carolina	.....	8	3	44	55	1	11	2	2	16	.....	...
Tennessee, eastern district	.....	22	.....	4	26	.....	13	1	2	16	.....	.....
Tennessee, middle district	.....	89	1	6	96	1	92	1	5	99	1	...
Tennessee, western district	4	197	1	17	219	.....	66	2	67	135	.....	...
Texas, eastern district	6	18	4	4	32	.....	89	.....	.....	89	.....	.....
Texas, western district	1	2	8	104	115	1	2	11	78	92	.....	.....
Vermont	20	1	.....	3	24	17	.....	.....	5	22	10	...
Virginia, eastern district	.....	5	.....	2	7	.....	18	2	1	21	.....	...
Virginia, western district	.....	29	.....	7	36	.....	67	2	19	88	.....	.....
West Virginia	.....	12	1	5	18	.....	1	1	1	3	.....	...
Wisconsin, eastern district	2	2	.....	1	5	.....	1	.....	3	4	.....	.
Wisconsin, western district	.....	7	.....	3	10	.....	8	.....	.....	8	.....	...
Arizona*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colorado	.....	1	.....	30	31	.....	.....	.....	1	1	.....	...
Dakota	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	...
District of Columbia*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Idaho	.....	.....	.....	2	2	.....	.....	.....	.....	.....	.....	...
Montana	.....	.....	.....	2	2	.....	.....	.....	1	1	.....	...
New Mexico	2	.....	1	69	72	1	.....	1	7	9	1	..
Utah	.....	1	2	1	4	.....	.....	1	233	234	.....	...
Washington	1	.....	.....	4	5	1	.....	.....	.....	1	.....	...
Wyoming	.....	.....	.....	.....	.....	.....	1	.....	4	5	.....	...
Total of each class of cases	3,772	2,014	135	933	6,854	1,133	978	109	838	3,058	287	78

*No report.

party, pending in the circuit and district courts of the United States on the 1st day of July the fiscal year ending June 30, 1874.

Civil suits to which the United States was a party, terminated during the fiscal year ending June 30, 1874.

Customs suits.				Internal-revenue suits.						Post-office suits.						Miscellaneous suits.					
Dismissed or discontinued.	Total.	Appealed from district to circuit.	Appealed from circuit to Supreme.	Judgment for United States.	Judgment for defendant.	Dismissed or discontinued.	Total.	Appealed from district to circuit.	Appealed from circuit to Supreme.	Judgment for United States.	Judgment for defendant.	Dismissed or discontinued.	Total.	Appealed from district to circuit.	Appealed from circuit to Supreme.	Judgment for United States.	Judgment for defendant.	Dismissed or discontinued.	Total.	Appealed from district to circuit.	Appealed from circuit to Supreme.
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	1	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	....	1	10	11	....	1
....	.....	....	....	5	....	1	6	....	....	....	....	....	....	....	....	3	....	....	3	....	....
....	.....	....	....	1	....	....	1	....	....	1	....	....	1	....	....	13	....	9	22	....	....
1	6	....	....	13	....	2	15	....	....	....	....	....	....	....	....	2	....	....	2	....	2
3	5	....	....	4	....	2	6	....	....	2	....	....	2	....	....	1	....	....	1	....	....
....	.....	....	....	.....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	3	....	....	.....	....	....	....	....	....	6	....	2	8	....	....	....	....	....	....	....	....
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	.....	....	....	49	11	24	84	....	....	6	....	1	7	....	....	1	....	....	1	....	....
1	1	....	....	5	....	2	7	....	....	2	....	....	2	....	....	6	....	7	13	....	....
1	1	....	....	13	1	5	19	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	.....	....	....	11	6	3	20	....	....	3	....	....	3	....	....	1	....	....	1	....	....
....	.....	....	....	3	....	17	20	....	....	1	....	....	1	....	....	6	....	....	6	....	....
....	.....	....	....	6	4	2	12	....	....	3	....	....	3	....	....	2	1	....	3	....	....
....	.....	....	....	1	....	....	1	....	....	9	....	....	9	....	....	4	....	1	5	....	....
....	.....	....	1	105	7	5	117	....	....	2	....	....	2	....	....	....	....	....	....	....	....
5	38	....	....	4	....	....	4	....	....	3	....	1	4	....	....	....	4	....	4	....	2
....	3	....	....	2	....	....	2	....	....	....	....	....	....	....	....	3	1	....	4	....	....
1	2	....	....	4	4	4	12	....	....	....	....	....	....	....	....	11	79	12	102	....	....
47	56	....	....	7	....	8	15	....	....	....	....	1	1	....	....	4	1	4	9	1	1
1	13	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	2	1	1	4	....	....
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....
....	.....	....	....	2	....	1	3	....	....	1	....	....	1	....	....	....	....	....	....	1	1
....	.....	....	....	11	....	....	11	....	....	4	....	2	6	....	....	2	....	....	2	....	....
....	1	....	....	2	1	6	9	....	....	7	....	....	7	....	....	4	....	4	8	....	....
2	4	....	....	9	....	5	14	....	....	....	....	....	....	....	....	16	....	4	20	1	....
....	.....	....	....	2	....	....	2	....	....	2	....	....	2	....	....	13	....	....	13	....	....
....	.....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	4	....	....	4	....	....
....	5	1	....	7	....	....	7	....	....	1	....	....	1	....	....	2	....	....	2	....	....
10	12	....	....	1	1	5	7	....	....	2	....	....	2	....	....	21	1	18	40	1	....
691	934	7	9	24	15	21	60	....	7	....	....	2	2	....	....	26	12	2	40	2	4
1	7	....	....	29	....	3	32	6	....	....	....	....	....	....	....	7	1	28	36	1	....
....	1	....	....	13	2	....	15	....	....	4	....	....	4	....	....	22	3	....	25	....	....
....	.....	....	....	33	....	3	36	....	....	2	....	....	2	....	....	....	....	....	....	....	....
1	2	....	....	3	....	5	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	.....	....	....	11	6	4	21	....	1	2	....	1	3	....	....	3	1	12	16	....	....
....	.....	....	....	.....	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....
14	15	....	....	15	4	5	24	....	1	....	....	....	....	....	....	1	2	1	4	....	....
....	.....	....	....	10	1	6	17	....	....	10	....	....	10	....	....	5	....	....	5	....	....
1	1	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	2	....	....
....	1	....	....	5	4	2	11	....	....	1	....	1	2	....	....	....	....	2	2	....	....
....	.....	....	....	10	1	2	13	1	1	1	....	....	1	....	....	....	....	2	2	....	....
....	1	....	....	46	13	33	92	....	....	1	....	....	1	....	....	1	1	3	5	....	....
....	.....	....	....	11	6	49	66	....	....	2	....	....	2	....	....	28	4	35	67	....	....
....	.....	6	2	81	8	....	89	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1	1	....	....	2	....	....	2	....	....	11	....	....	11	....	....	24	....	54	78	....	....
7	17	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	....	4	1	5	....	....
....	.....	....	....	13	1	4	18	....	....	1	....	1	2	....	....	....	....	1	1	....	....
....	.....	....	....	48	15	4	67	....	....	1	1	....	2	....	....	4	....	15	19	....	....
....	.....	....	....	1	....	....	1	....	....	1	....	....	1	....	....	1	....	....	1	....	....
....	.....	2	....	.....	....	1	1	....	....	....	....	....	....	....	....	1	....	2	3	....	....
....	.....	....	....	8	....	....	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....
....	.....	....	....	.....	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....
....	.....	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	4	2	1	7	....	....
....	1	....	....	.....	....	....	....	....	....	....	....	....	....	....	....	21	....	212	233	....	....
....	.....	....	....	.....	....	....	....	....	....	1	....	....	1	....	1	....	....	....	....	....	....
1	1	....	....	.....	....	....	....	....	....	1	....	....	1	....	....	2	1	1	4	....	....
....	.....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
790	1, 133	16	12	632	111	235	978	7	10	96	1	12	109	....	1	276	120	442	838	7	11

eceived.

EXHIBIT A.—*Statement showing the number of civil suits, &c.*—Continued.

Districts.	Aggregate amount, judgment for which has been in favor of United States.	Amount actually realized.
Alabama, northern district		
Alabama, middle district		
Alabama, southern district	$212 33	*$213 33
Arkansas, eastern district	5, 172 00	71, 546 [illegible]
Arkansas, western district	9, 450 00	731 [illegible]
California	49, 267 00	40, 909 [illegible]
Connecticut	6, 545 89	6, 012 [illegible]
Delaware		
Florida, northern district	15, 593 58	852 [illegible]
Florida, southern district		
Georgia, northern district	11, 565 98	1, 199 [illegible]
Georgia, southern district	20, 592 92	1, 989 [illegible]
Illinois, northern district	85, 646 97	43, 816 [illegible]
Illinois, southern district	222, 578 21	6, 886 [illegible]
Indiana	27, 043 99	10, 776 [illegible]
Iowa	9, 751 65	6, 273 [illegible]
Kansas	10, 168 00	1, 100 [illegible]
Kentucky	28, 549 60	19, 211 [illegible]
Louisiana	162, 143 00	17, 077 [illegible]
Maine	2, 088 43	2, 088 [illegible]
Maryland	5, 123 64	2, 623 [illegible]
Massachusetts	11, 531 10	10, 939 [illegible]
Michigan, eastern district	3, 878 15	3, [illegible]
Michigan, western district	600 00	
Minnesota	1, 375 77	
Mississippi, northern district	12, 707 81	223 [illegible]
Mississippi, southern district	11, 274 97	2, 642 [illegible]
Missouri, eastern district	12, 633 35	1, 370 [illegible]
Missouri, western district	11, 944 93	1, 186 [illegible]
Nebraska	6, 437 47	6, 437 [illegible]
Nevada, (no report received)		
New Hampshire	4, 000 00	
New Jersey	9, 857 40	5, 779 [illegible]
New York, northern district	77, 551 00	56, 489 [illegible]
New York, southern district	631, 349 30	395, 353 [illegible]
New York, eastern district	76, 870 84	13, 257 [illegible]
North Carolina, eastern district	50, 922 40	19, 115 [illegible]
North Carolina, western district	7, 874 15	3, 796 [illegible]
Ohio, northern district	500 00	
Ohio, southern district	77, 506 38	16, 688 [illegible]
Oregon	217 00	217 [illegible]
Pennsylvania, eastern district	89, 487 03	21, 662 [illegible]
Pennsylvania, western district	27, 178 74	14, 694 [illegible]
Rhode Island	2, 886 66	2, 332 [illegible]
South Carolina	509 39	469 [illegible]
Tennessee, eastern district	4, 177 69	622 [illegible]
Tennessee, middle district	13, 480 20	2, 492 [illegible]

* $1,265.27 realized on judgments of former years. † $379.87 realized on judgments of former years.

EXHIBIT A.—*Statement showing the number of civil suits, &c.*—Continued.

Districts.	Aggregate amount, judgment for which has been in favor of United States.	Amount actually realized.
Tennessee, western district	$31,035 12	$16,725 00
Texas, eastern district	14,695 82	12,695 82
Texas, western district	77,542 46	.....
Vermont	20,765 50	20,765 50
Virginia, eastern district	1,794 34	1,741 42
Virginia, western district	9,676 34	1,418 07
West Virginia	6,851 38	590 90
Wisconsin, eastern district	250 00	250 00
Wisconsin, western district	1,415 00	1,198 00
Arizona, (no report received)	.....	.....
Colorado	1,000 00	1,206 64
Dakota	114 12	114 12
District of Columbia, (no report received)	.....	.....
Idaho	3,439 20	.....
Montana	.....	.....
New Mexico	34,712 73	.....
Utah	477 27	.....
Washington	166 34	.....
Wyoming	257 88	257 88
Total	2,021,724 31	867,192 18

EXHIBIT B.—*Statement showing the number of criminal cases pending in the circuit and di during the fiscal year*

Districts.	Criminal cases pending July 1, 1874.								Criminal cases					
									Customs.				Internal revenue.	
	Customs prosecutions.	Internal-revenue prosecutions.	Post-office prosecutions.	Prosecutions under enforcement acts.	Prosecutions under naturalization laws.	Prosecutions, embezzlement.	Miscellaneous prosecutions.	Total.	Convictions.	Acquittals.	Nolled, discontinued, or quashed.	Total.	Convictions.	Acquittals.
Alabama, northern district	....	60	....	30	....	....	4	94	....	....	....	....	....	....
Alabama, middle district	....	42	....	28	....	1	....	71	....	....	....	....	....	....
Alabama, southern district	2	21	4	3	....	....	3	33	1	....	....	1	17	5
Arkansas, eastern district	....	4	3	....	....	....	6	13	....	....	....	....	3	....
Arkansas, western district	....	10	2	....	....	....	28	40	....	....	....	....	11	....
California	3	20	....	....	....	....	19	42	3	1	6	10	68	1
Connecticut	....	5	7	....	2	1	1	16	....	3	....	3	....	....
Delaware	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Florida, northern district	....	3	....	....	....	2	3	8	....	....	....	....	....	....
Florida, southern district	....	....	....	....	....	....	4	4	....	....	....	....	....	....
Georgia, northern district	....	132	2	18	....	....	9	161	....	....	....	....	124	32
Georgia, southern district	1	8	1	16	....	....	11	37	4	....	5	9	9	1
Illinois, northern district	3	32	1	....	....	....	4	40	1	....	....	1	3	....
Illinois, southern district	....	34	5	....	....	....	21	60	....	....	....	....	50	1
Indiana	....	23	....	....	....	....	....	23	....	....	....	....	48	4
Iowa	....	150	34	....	....	2	41	227	....	....	....	....	98	32
Kansas	....	53	5	....	....	3	26	87	....	....	....	....	3	11
Kentucky	....	37	....	....	....	....	....	37	....	....	....	....	31	7
Louisiana	15	3	1	11	....	7	....	37	....	....	4	4	....	....
Maine	8	2	....	....	....	....	3	13	6	....	4	10	2	....
Maryland	1	28	2	4	....	....	4	39	12	2	....	14	9	1
Massachusetts	15	91	15	....	2	4	24	151	1	....	3	4	26	10
Michigan, eastern district	7	....	....	....	....	....	13	20	66	....	4	70	36	....
Michigan, western district	....	26	7	....	....	....	46	79	....	....	....	....	7	....
Minnesota	....	2	....	....	....	....	6	8	....	....	....	....	2	....
Mississippi, northern district	....	176	....	171	....	5	16	368	....	....	....	....	22	10
Mississippi, southern district	....	....	....	....	....	5	7	12	....	....	....	....	116	8
Missouri, eastern district	....	47	....	....	....	1	6	54	....	....	....	....	84	7
Missouri, western district	....	36	8	....	....	....	15	59	....	....	....	....	34	....
Nebraska	....	46	....	....	....	....	2	48	....	....	....	....	60	7
Nevada*	....	....	....	....	....	....	....	....	....	....	....	....	....	....
New Hampshire	1	10	2	....	....	1	....	14	3	....	....	3	3	....
New Jersey	5	24	....	1	....	....	4	34	1	....	1	2	21	1
New York, northern district	31	140	15	1	5	1	79	272	28	1	2	31	25	10
New York, southern district	13	53	29	2	3	4	95	199	1	....	....	1	3	....
New York, eastern district	....	72	....	....	....	....	13	85	....	....	....	....	1	1
North Carolina, eastern district	....	47	1	2	....	....	6	56	....	....	....	....	30	7
North Carolina, western district	....	616	1	4	....	1	21	643	....	....	....	....	226	37
Ohio, northern district	....	6	....	....	....	....	2	8	....	....	1	1	45	....
Ohio, southern district	....	2	3	....	....	....	11	16	....	....	....	....	12	1
Oregon	....	4	....	....	....	....	4	8	....	....	....	....	6	....
Pennsylvania, eastern district	....	12	1	....	....	....	29	42	....	....	....	....	3	4
Pennsylvania, western district	....	128	11	....	1	....	105	245	....	....	....	....	24	1
Rhode Island	....	3	2	....	....	4	2	11	....	....	....	....	2	....
South Carolina	....	59	....	40	....	1	6	106	1	....	....	1	45	16
Tennessee, eastern district	....	381	3	1	....	....	48	433	....	....	....	....	126	8
Tennessee, middle district	....	214	1	7	....	2	12	236	....	....	....	....	16	25
Tennessee, western district	....	107	10	18	....	2	11	148	....	....	....	....	24	11
Texas, eastern district	....	54	2	1	....	23	5	85	....	....	....	....	....	....
Texas, western district	....	1,332	24	5	....	13	28	1,402	....	....	....	....	99	19
Vermont	19	1	2	....	....	7	2	31	15	....	3	18	2	....
Virginia, eastern district	....	15	1	3	....	....	8	27	4	4	10	18	4	....
Virginia, western district	....	107	2	....	....	....	13	122	....	....	....	....	14	15
West Virginia	....	126	4	....	....	....	6	136	....	....	....	....	20	26
Wisconsin, eastern district	....	....	1	....	....	....	11	12	....	....	....	....	....	....
Wisconsin, western district	....	7	1	....	....	....	3	11	....	....	....	....	2	....
Arizona*	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Colorado	....	27	3	....	....	1	139	170	....	....	....	....	8	3
Dakota	1	12	....	....	....	....	20	33	....	....	1	1	2	1
District of Columbia	....	....	....	....	....	....	32	32	....	....	....	....	....	....
Idaho	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Montana	....	....	....	....	....	....	15	15	....	....	....	....	....	....
New Mexico	....	79	2	....	....	2	20	103	....	....	....	....	9	20
Utah	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Washington	....	3	1	....	....	....	5	9	....	....	....	....	....	....
Wyoming	....	2	....	....	....	....	....	2	....	....	....	....	6	1
Total of each class of cases	125	4,734	219	366	13	93	1,077	6,627	147	8	47	202	1,610	364

* No report received.

trict courts of the United States on the 1st day of July, 1874, with the number terminated ending June 30, 1874.

terminated during the fiscal year ending June 30, 1874.

Internal revenue.		Post-office.				Enforcement acts.				Naturalization laws.				Embezzlement.				Miscellaneous.			
Nolled, discontinued, or quashed.	Total.	Convictions.	Acquittals.	Nolled, discontinued, or quashed.	Total.	Convictions.	Acquittals.	Nolled, discontinued, or quashed.	Total.	Convictions.	Acquittals.	Nolled, discontinued, or quashed.	Total.	Convictions.	Acquittals.	Nolled, discontinued, or quashed.	Total.	Convictions.	Acquittals.	Nolled, discontinued, or quashed.	Total.
3	25			1	1	1	1		2									4	3	1	8
	3	1			1													6		1	7
19	30																	32	11	22	65
196	265	2	1		3			5	5									48	23	35	106
6	6	3			3															1	1
														1		2	3				
2	2					4		13	17					2		1	3	1		2	3
																		1	3	4	8
69	245		1	2	3			6	6										1	6	7
2	12	2			2			1	1										1	2	3
	3	15	1	1	17					1				1		1	1	1		2	3
3	54	1		2	3													4		8	12
30	82	3		3	6											2	2	4	2	9	15
20	140	4			4													37	13		50
2	18	3		2	5											1	1	10	6	32	48
9	49	3			3		144		44												
																		2			2
	2	1	1	1	3													2	1	3	6
9	19	2	1	2	5	1	2	8	11					1			1	30	10	1	41
60	96	13		6	19											1	1	12	1	14	27
34	70	13	1		14	2			2									9		2	11
2	9			1	1													4		2	6
1	3	3			3													7	2	21	30
13	57	1	1		2	57	37	26	120						2	4	6		1	1	2
11	135	1			1										1	1	2	2	7	1	10
39	130			2	2																
44	78	5		1	6													10	2	12	24
25	72	3	1	3	7													11	2	10	23
2	5	2	1	7	10													1			1
15	37	4		1	5											1	1	4	1	2	7
23	58	22	1	2	25	2	1		3									10	9	2	21
	3	11		1	12									3		2	5	8	1	4	13
8	10	2			2													1		1	2
25	62	8	1	1	10	26	2	1	29							2	2	1	4	8	13
69	326	1			1	9		143	152					1			1	11	7	1	19
18	63	15		3	18													3		6	9
10	23	3		2	5											1	1	6	3	4	13
2	8	1	3		4													16	8	6	30
6	13	2		1	3													9	2	44	55
5	30	3		1	4													13		5	18
2	4	1			1			2	2									1			1
38	107	1			1			555	555						1		1	4	1	2	7
115	253	2			2		1		1									24	2	63	89
14	63			1	1		2	3	5									4	1	2	7
27	62	2	1	3	6			3	3									1		4	5
9	9																	1	1	1	3
143	261		1	4	5			6	6							1	1	7		5	12
1	3																				
3	7			1	1															2	2
28	57	2	1		3		2		2					1			1	2	2	5	9
57	113	1			1									1			1	1			1
		1			1													4	1	1	6
	2																	2			2
17	27	1	1	2	4													1	3	19	23
6	9																	10	16	17	43
																		128	47	78	253
														1			1	5	1	1	7
4	4																	5	6	6	17
5	53	4	7	1	12											2	2	4	12	4	20
																		28	4	6	38
7	14																	1	3	2	6
1,258	3,291	168	25	58	251	102	92	772	966	1			1	11	4	22	37	553	224	493	1,270

†Decided on demurrer in Supreme Court.

EXHIBIT C.—*Statement showing the number of civil suits, to which the United States was not during the fiscal year*

Districts.	Number commenced during the fiscal year ending June 30, 1874.				Number terminated during the fiscal year ending June 30, 1874.			
	Admiralty.	Bankruptcy.	Other suits.	Total.	Admiralty.	Bankruptcy.	Other suits.	Total.
Alabama, northern district	.....	18	.....	18	.....	2	.....	2
Alabama, middle district	.....	40	.....	40	.....	26	.....	26
Alabama, southern district	5	14	45	64	3	3	48	54
Arkansas, eastern district*	.....	.....	.....	.....	.....	.....	.....	.....
Arkansas, western district	.....	3	22	25	.....	1	16	17
California	62	161	120	343	46	34	52	132
Connecticut	8	85	72	165	8	55	63	126
Delaware	3	7	21	31	.....	7	6	13
Florida, northern district*	.....	.....	.....	.....	.....	.....	.....	.....
Florida, southern district	38	.....	1	39	34	.....	1	35
Georgia, northern district	.....	200	41	241	.....	108	77	185
Georgia, southern district	3	365	122	490	4	34	397	435
Illinois, northern district	121	377	2, 445	2, 943	98	181	2, 027	2, 306
Illinois, southern district	15	123	698	836	2	81	452	535
Indiana	9	225	852	1, 086	6	125	346	477
Iowa	2	111	641	754	2	35	478	515
Kansas	.....	25	298	323	.....	15	85	100
Kentucky	.....	456	35	491	.....	211	29	240
Louisiana	157	109	120	386	70	.....	12	82
Maine	18	74	66	158	22	56	38	116
Maryland	69	52	48	169	43	26	19	88
Massachusetts	112	88	450	650	120	43	383	546
Michigan, eastern district	277	159	270	706	178	69	166	413
Michigan, western district	8	84	172	264	4	.....	88	92
Minnesota	10	74	182	266	.....	.....	.....	.....
Mississippi, northern district	.....	37	61	98	.....	46	55	101
Mississippi, southern district	11	77	57	145	17	.....	35	52
Missouri, eastern district	226	148	65	439	192	84	41	317
Missouri, western district*	.....	.....	.....	.....	.....	.....	.....	.....
Nebraska	1	33	.....	34	1	10	.....	11
Nevada*	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire	.....	.....	25	25	.....	.....	12	12
New Jersey	16	21	55	92	9	8	14	31
New York, northern district	32	570	96	698	16	186	27	229
New York, southern district	245	825	460	1, 530	185	488	110	783
New York, eastern district	352	148	87	587	122	91	13	226
North Carolina, eastern district	.....	9	41	50	.....	2	49	51
North Carolina, western district	.....	197	37	234	.....	393	29	422
Ohio, northern district	165	89	146	400	123	15	59	197
Ohio, southern district	32	179	147	358	23	240	167	430
Oregon	16	28	24	68	13	22	3	38
Pennsylvania, eastern district	119	224	239	582	72	77	135	284
Pennsylvania, western district	27	287	597	911	27	136	149	312
Rhode Island	55	39	18	112	1	24	10	35
South Carolina	12	169	64	245	6	153	17	176
Tennessee, eastern district	.....	3	.....	3	.....	3	18	21
Tennessee, middle district	1	71	61	133	.....	28	70	98
Tennessee, western district	25	63	156	244	22	48	76	146
Texas, eastern district	27	29	65	121	11	8	75	94
Texas, western district*	.....	.....	.....	.....	.....	.....	.....	.....
Vermont	.....	75	65	140	.....	62	53	115
Virginia, eastern district	68	371	59	498	60	174	73	307
Virginia, western district	.....	581	52	633	.....	227	25	252
West Virginia	7	17	39	63	5	29	34	68
Wisconsin, eastern district	.....	.....	1	1	.....	.....	.....	.....
Wisconsin, western district	2	41	157	200	1	20	101	122
Arizona*	.....	.....	.....	.....	.....	.....	.....	.....
Colorado	.....	22	.....	22	.....	5	.....	5
Dakota	.....	.....	.....	.....	.....	.....	.....	.....
District of Columbia*	.....	.....	.....	.....	.....	.....	.....	.....
Idaho	.....	.....	.....	.....	.....	.....	.....	.....
Montana	.....	5	.....	5	.....	3	.....	3
New Mexico	.....	.....	6	6	.....	.....	2	2
Utah	.....	13	.....	13	.....	3	.....	3
Washington	6	10	.....	16	6	6	.....	12
Wyoming	.....	.....	.....	.....	.....	.....	.....	.....
Total of each class of cases	2, 362	7, 231	9, 601	19, 194	1, 552	3, 703	6, 235	11, 490

* No report

a party, commenced and terminated in the circuit and district courts of the United States ending June 30, 1874.

Number terminated during the fiscal year ending June 30, 1874.

Admiralty.				Bankruptcy.				Other suits.			
Judgment for plaintiff.	Judgment for defendant.	Not stated.	Total.	Judgment for plaintiff.	Judgment for defendant.	Not stated.	Total.	Judgment for plaintiff.	Judgment for defendant.	Not stated.	Total.
						2	2				
						26	26				
	3		3		3		3	31	17		48
					1		1	11	5		16
32	14		46			34	34	19	29	4	52
		8	8			55	55	34	10	19	63
						7	7	2	1	3	6
34			34						1		1
						108	108	42	35		77
2	2		4	9	1	24	34	358	39		397
78	20		98			181	181	901	1,126		2,027
2			2	46	35		81	309	123	20	452
3	2	1	6	5	12	108	125	174	27	145	346
	2		2			35	35	303		175	478
				7		8	15	40	4	41	85
						211	211	22	7		29
41	29		70					11		1	12
13	9		22	1		55	56	15	13	10	38
11	9	23	43	11	15		26	10	8	1	19
50	68	2	120	12	31		43	42	44	297	383
169	9		178	64	5		69	145	21		166
2	2		4					66	12		88
						46	46	31	24		55
14	3		17					20	15		35
172	7	13	192			84	84	16	8	17	41
		1	1			10	10				
								4	3	5	12
9			9	5	3		8	8	6		14
	1	15	16			186	186	2	1	24	27
90	25	70	185	284	211	13	488	41	21	48	110
117	5		122			91	91			13	13
				2			2	26	23		49
						393	393	26	3		29
122	1		123		15		15	34	25		59
11	12		23			240	240	84	83		167
4	2	7	13			22	22	1	2		3
49	23		72			77	77	89	46		135
17		10	27			136	136	114	7	28	149
		1	1			24	24	4	4	2	10
5	1		6			153	153	15	2		17
						3	3	13	5		18
				28			28	58	12		70
11	11		22			48	48	31	45		76
5	6		11			8	8	50	25		75
				21	6	35	62			53	53
44	16		60			174	174	41	32		73
				13		214	227	10		15	25
4	1		5			29	29	30	4		34
		1	1			90	90	69	2	37	101
						5	5				
				1	2		3				
								1	1		2
						3	3				
4	2		6	5	1		6				
1,115	285	152	1,452	494	341	2,868	3,703	3,346	1,921	968	6,235

received.

EXHIBIT C.—*Statement showing the number of civil suits, to which the United States was*

Districts.	Amount of judgments for plaintiffs.	
	Admiralty.	Bankruptcy.
Alabama, northern district		
Alabama, middle district		
Alabama, southern district		
Arkansas, eastern district, (no report received)		
Arkansas, western district		
California	$57, 884 13	
Connecticut		
Delaware		
Florida, northern district, (no report received)		
Florida, southern district	75, 491 54	
Georgia, northern district		
Georgia, southern district	644 73	$12, 56[illegible] 95
Illinois, northern district	14, 125 78	
Illinois, southern district	159 40	
Indiana	1, 240 00	
Iowa		
Kansas		5, 500 00
Kentucky		
Louisiana	58, 215 00	
Maine	4, 625 44	1, 233 91
Maryland	2, 585 26	
Massachusetts	51, 531 62	
Michigan, eastern district	32, 825 94	10, 165 52
Michigan, western district	297 75	
Minnesota		
Mississippi, northern district		
Mississippi, southern district	2, 830 95	
Missouri, eastern district		
Missouri, western district, (no report received)		
Nebraska	75 00	
Nevada, (no report received)		
New Hampshire		
New Jersey		776 12
New York, northern district		
New York, southern district	428, 295 92	
New York, eastern district	50, 440 60	
North Carolina, eastern district		19 30
North Carolina, western district		
Ohio, northern district	8, 517 45	
Ohio, southern district	19, 830 15	
Oregon	6, 271 71	
Pennsylvania, eastern district	49, 996 73	
Pennsylvania, western district	80, 194 86	
Rhode Island		
South Carolina	940 36	
Tennessee, eastern district		
Tennessee, middle district		
Tennessee, western district	8, 759 91	
Texas, eastern district	2, 020 00	
Texas, western district, (no report received)		
Vermont		
Virginia, eastern district		
Virginia, western district		
West Virginia	4, 284 17	
Wisconsin, eastern district		
Wisconsin, western district		
Arizona, (no report received)		
Colorado		
Dakota		
District of Columbia, (no report received)		
Idaho		
Montana		
New Mexico		
Utah		
Washington		
Wyoming		
Total of each class of cases	962, 074 40	30, 263 35

not a party, commenced and terminated in the circuit and district courts, &c.—Continued.

Amount of judgments for plaintiffs.		Amount of judgments for defendants.			
Other suits.	Total.	Admiralty.	Bankruptcy.	Other suits.	Total.
$51,019 56	$51,019 56				
10,229 11	10,229 11		$24 30	$2,996 41	$3,020 71
169,041 25	226,925 38				
57,934 33	57,934 33				
292 90	292 90				
	75,491 54				
101,107 90	101,107 90				
413,012 28	426,225 96			1,173 40	1,173 40
1,106,659 75	1,120,785 53				
2,284,699 78	2,284,859 18			262 35	262 35
865,318 04	866,558 04			7 00	7 00
244,199 61	244,199 61				
890,000 00	825,500 00			7,400 00	7,400 00
5,429 63	5,429 63				
41,439 00	99,654 00				
23,417 09	29,276 43				
550 00	3,145 26				
100,554 46	152,086 08	$813 17		8,525 16	9,338 23
125,236 07	168,167 23				
157,242 74	157,540 49				
41,446 66	41,446 66			649 45	649 45
39,859 66	42,680 61				
38,616 34	38,691 34				
29,490 00	29,490 00				
	776 18				
13,784 40	13,784 40	87 58		25 19	112 77
154,484 69	582,750 61	22,852 06		5,532 95	28,385 01
	50,440 60	5,262 00			5,262 00
299,996 89	299,946 19			1,315 11	1,315 11
33,578 62	33,578 62			174 31	174 31
18,139 95	26,657 40				
159,314 99	179,135 14				
27 00	6,298 71				
750,112 90	800,109 63				
195,923 75	276,116 61				
708,943 12	708,943 12			391 25	391 25
62,420 00	63,360 36	200 30		280 00	480 30
13,457 64	13,457 64				
72,236 87	72,236 87				
34,233 39	42,993 30				
47,353 40	49,373 40			1,723 80	1,723 80
22,808 97	22,808 97			25 00	25 00
52,644 52	52,644 52				
12,243 00	12,243 00			2,625 00	2,625 00
34,269 70	38,553 87			220 40	220 40
103,677 92	103,677 92			190 00	190 00
9,516,347 88	10,508,625 83	29,215 01	24 30	33,516 78	62,756 09

EXHIBIT D.—*Statement of expenditures made from the appropriation for expenses of the courts of the United States during the fiscal year ending June* 30, 1874.

Districts.	Marshals.	District attorneys, special counsel, &c.	Clerks.	Commissioners.	Rents.	Miscellaneous.	Total.
Alabama, northern district	$5,000 00						$5,000 00
Alabama, middle district	6,580 00			$379 95	$450 00	$92 00	7,501 95
Alabama, southern district	11,688 00	$3,940 60	$693 65	305 95			16,628 20
Arkansas, eastern district	22,998 00	1,930 00	973 83	842 10	1,050 00	4,812 33	32,606 26
Arkansas, western district	80,785 00	2,177 00	1,967 15	2,582 45		656 25	88,167 85
California	28,612 00	6,486 79	4,036 00	1,233 80	11,000 00	4,990 00	56,338 59
Connecticut	5,150 00	597 03	201 75	66 90		478 29	6,493 97
Delaware	4,404 00	390 00	165 75	15 65			4,975 40
District of Columbia	82,947 00	33,498 16	8,207 73	13 80		5,318 59	129,985 28
Expenses United States jail						43,762 01	43,762 01
Florida, northern district	24,140 00	822 40	413 90	27 90	1,725 00		27,129 20
Florida, southern district	6,000 00	220 00	155 40	18 10	750 00		7,143 50
Georgia, northern district	57,280 00	5,650 80	3,605 10	1,851 90	1,500 00		69,887 80
Georgia, southern district	19,315 00			484 68			19,799 68
Illinois, northern district	28,756 00	4,330 00	808 25	922 25		1,820 50	36,637 00
Illinois, southern district	27,500 00	2,975 80	360 00	840 55		778 40	32,454 75
Indiana	11,871 00	2,456 60	972 00	529 95			15,829 55
Iowa	64,863 00	8,345 12	2,507 95	880 55	724 99		77,321 61
Kansas	58,800 00	3,442 00	767 75	2,320 50	575 00		65,905 25
Kentucky	55,450 00	6,952 00	2,035 75	1,367 00	450 00	1,537 50	67,792 25
Louisiana	61,260 00	4,095 00	306 45	2,174 15		1,254 75	69,090 35
Maine	12,903 00		395 60	58 75			13,357 35
Maryland	38,300 00	6,377 50	1,485 68	1,368 30			47,531 48
Massachusetts	39,451 00	7,140 00		2,145 45			48,736 45
Michigan, eastern district	23,565 00	4,275 00	819 20	574 60		1,189 87	30,423 67
Michigan, western district	13,567 00	1,466 40	449 95	469 30	600 00		16,552 65
Minnesota	25,350 00	1,191 15	834 15	1,183 05	641 66	806 50	30,006 51
Mississippi, northern district	29,920 00	4,491 20	1,484 15	241 35	159 00		36,296 69
Mississippi, southern district	38,000 00	4,138 85	120 00	91 80			42,350 65
Missouri, eastern district	34,092 00	4,138 55	275 25	1,550 40			40,056 20
Missouri, western district	45,752 00	3,103 33	1,685 55	742 95	1,075 00	498 60	52,857 43
Nebraska	34,324 00	2,611 00	1,169 96	430 95	1,125 00		39,660 91
Nevada	3,338 00		340 80				3,678 80
New Hampshire	7,600 00	487 60	235 89	134 10	50 00		8,507 59
New Jersey	15,827 00	1,895 00	1,328 75	679 25	400 00		20,130 00
New York, northern district	87,632 94	12,981 40	2,270 05	9,528 93		595 00	113,208 32
New York, southern district	93,000 00	30,176 02	2,590 00	2,812 75	41,583 33	1,656 95	171,898 05
New York, eastern district	18,008 00	4,418 45	790 00	2,018 20	10,500 00		35,734 65
North Carolina, eastern district	142,733 00	2,392 30	1,817 37	574 30			147,516 97
North Carolina, western district		5,979 00	3,279 03	11,907 90		50 00	21,215 93
Ohio, northern district	23,000 00	4,915 20	1,855 18	1,077 15			30,147 53
Ohio, southern district	37,102 00	10,958 33	2,987 85	1,371 05		759 66	49,179 79
Oregon	19,746 00		2,364 60	94 80	1,050 00		23,184 80
Pennsylvania, eastern district	86,307 00	5,455 00	3,048 05	524 35			32,335 00

Pennsylvania, western district	43,086 00	4,920 60	1,512 65	153 05	50 00		49,722 30
Rhode Island	6,930 00	4,226 00	297 05	283 07			11,736 12
South Carolina	44,658 00	9,486 20	2,078 95	5,130 90	200 00		61,554 05
Tennessee, eastern district	57,282 39	9,762 45	4,736 44	1,263 00	204 11		73,248 39
Tennessee, middle district	32,500 00	3,896 50	1,634 71	646 95			38,678 16
Tennessee, western district	35,000 00	3,032 10	1,534 25	2,498 75	1,975 00		44,040 10
Texas, eastern district	20,000 00	1,055 00	1,634 09	39 00	600 00		23,328 09
Texas, western district	57,290 00	905 60	3,241 42	5,857 60	2,062 50	635 00	69,992 12
Vermont	10,835 00	895 10	1,437 20	51 05			13,218 35
Virginia, eastern district	16,905 22	3,947 30	1,535 40	804 85			23,172 77
Virginia, western district	26,652 00	2,207 80	1,062 00	626 67	650 00		31,198 47
West Virginia	20,766 00	1,793 40	699 25	14 50			23,273 15
Wisconsin, eastern district	16,064 00	891 80	1,099 25	502 65			18,557 70
Wisconsin, western district	14,207 00	6,609 20	1,488 45	201 15			22,505 80
Territories:							
Arizona		600 00	109 75	11 70			721 45
Colorado	20,000 00	1,595 67	843 05	214 80	300 00		22,954 52
Dakota	41,768 00	3,107 00	850 92	627 85	1,770 00		48,124 37
Idaho	13,485 00	899 00	495 05		750 00		15,629 05
Montana	25,835 00	1,367 00	748 05	28 10	1,014 00		28,992 15
New Mexico	42,307 00	15 00	1,778 65	83 95			44,184 60
Utah	7,941 63		85 00				8,026 63
Washington	39,662 00	2,703 00	1,140 45	353 95			43,860 60
Wyoming	14,341 00	1,400 00	904 55	68 45	1,350 00		18,064 00
Total	2,071,332 18	275,476 90	89,063 85	75,580 10	86,335 58	71,692 20	2,669,730 81

EXHIBIT E.—*Statement showing the number of assistants to the United States attorneys, their employment, and compensation.*

District.	Name.	Employment.	Compensation
Alabama, southern district	J. H. Wallace	Regular assistant	$1,500
Do	L. E. Parsons	Special assistant in cases arising under the enforcement acts.	Undetermined
Arkansas, western district	William Walker	Special assistant in United States case *versus* H. Snyder.	10
Do	B. T. Duval	Special assistant in investigation in the western district of Arkansas.	Undetermined
California	A. P. Van Duzer	Regular assistant	2,500
Do	J. M. Coghlan	Regular assistant	4,000
Do	L. D. Latimer	Special assistant in United States cases of title to light-house sites.	Undetermined
Connecticut	W. C. Strawbridge	Regular assistant	1,000
District of Columbia	R. Harrington	Regular assistant	2,500
Florida, northern district	W. G. M. Davis	Special assistant in case of United States *versus* H. Jenkins, jr.	250
Georgia	G. S. Thomas	Regular assistant	2,000
Do	A. T. Akerman	Special assistant in United States case against Georgia Railroad and Banking Company.	Undetermined
Do	H. Hilliard	Special assistant in United States case *versus* T. G. Simms.	Undetermined
Illinois, northern district	L. H. Boutelle	Regular assistant	3,000
Do	H. T. Glover	Regular assistant	1,500
Illinois, southern district	E. T. Roe	Regular assistant	1,500
Indiana	C. L. Holstein	Regular assistant	2,000
Iowa	J. M. Bailon	Regular assistant	1,500
Do	L. R. Seaton	Regular assistant	2,500
Do	D. B. Henderson	Special assistant in United States case *versus* Rhomberg.	Undetermined
Kansas	T. Ryan	Regular assistant	1,500
Kentucky	W. A. Bullitt	Regular assistant	2,500
Louisiana	R. Hutcheson	Regular assistant to April, 1874	2,500
Do	J. W. Gurley	Regular assistant	2,500
Maryland	A. M. Rogers	Regular assistant	2,000
Massachusetts	E. L. Barney	Regular assistant	3,000
Do	W. A. Hayes, jr	Regular assistant	1,500
Do	P. Cummings	Regular assistant from September, 1874.	2,500
Do	F. Dabney	Regular assistant to September, 1874.	2,500
Michigan, eastern district	J. W. Finney	Regular assistant	2,500
Do	H. H. Swan	Regular assistant	2,500
Michigan, western district	W. D. Fuller	Regular assistant	[illegible]
Mississippi, northern district	B. W. Lee	Regular assistant	2,000
Mississippi, southern district	W. H. Parker	Regular assistant to July 1, 1874	[illegible]
Do	J. M. McKee	Regular assistant from July 1, 1874.	2,500
Missouri, eastern district	W. H. Bliss	Regular assistant	2,500
Missouri, western district	H. B. Johnson	Regular assistant	2,500
New Jersey	J. J. King	Regular assistant	1,500
New York, northern district	A. W. Brazee	Regular assistant	2,500
Do	J. E. Pound	Regular assistant	2,500
Do	J. A. Murray	Regular assistant from July 1, 1874.	1,500
New York, southern district	H. E. Tremain	Regular assistant	5,000
Do	T. Simons	Regular assistant	5,000
Do	A. H. Purdy	Regular assistant	3,000
Do	R. M. Sherman	Regular assistant	2,500
Do	J. A. Goodlett	Regular assistant	2,500
Do	E. H. Smith	Regular assistant	2,500
Do	L. F. Post	Regular assistant	1,500
Do	J. J. Hoffman	Regular assistant	1,500
Do	M. A. Friend	Special assistant in United States case *versus* Butler *et als.*	Undetermined
New York, eastern district	W. D. Hughes	Regular assistant to April 15, 1874.	2,500
Do	G. W. Hoxie	Regular assistant	2,500
Do	H. G. Hull	Regular assistant from April 15, 1874.	2,000
North Carolina, eastern dist.	W. H. Young	Regular assistant	5,000
North Carolina, western dist.	W. S. Ball	Regular assistant	1,500
Do	M. Erwin	Regular assistant	$300 per [illegible]
Ohio, northern district	H. S. Sherman	Regular assistant	2,000
Ohio, southern district	C. Richards	Regular assistant	2,500
Do	R. Dyer	Regular assistant	2,500

EXHIBIT E.—*Statement showing the number of assistants, &c.*—Continued.

District.	Name.	Employment.	Compensation.
Ohio, southern district	H. Hooper	Regular assistant to February, 1874.	$2,500 00
Do	C. G. Jahn	Regular assistant to December, 1873.	1,500 00
Pennsylvania, eastern district	J. R. Valentine	Regular assistant	3,000 00
Do	G. L. Douglass	Regular assistant	Without compensation.
Pennsylvania, western district	T. A. Pender	Regular assistant	1,200 00
Do	A. A. Adams	Regular assistant	2,500 00
South Carolina	W. Stone	Regular assistant	2,000 00
Do	W. E. Earle	Regular assistant	2,500 00
Tennessee, eastern district	A. H. Pettibone	Regular assistant	2,000 00
Tennessee, middle district	H. Harrison	Regular assistant	1,500 00
Tennessee, western district	J. B. Clough	Regular assistant	1,500 00
Texas, western district	W. E. Horne	Special assistant in United States cases arising under the enforcement acts.	Undetermined.
Vermont	J. D. Peck	Regular assistant	750 00
Do	J. W. Stewart	Special assistant in United States case *versus* Crane and Jewett.	Undetermined.
Virginia, eastern district	W. F. Worthington	Regular assistant	2,000 00
Do	L. H. Chandler	Special assistant in United States cases arising under the enforcement acts.	750 00
Do	A. Morton	Special assistant in United States cases arising under the enforcement acts.	750 00
Virginia, western district	D. S. Lewis	Regular assistant	2,000 00
West Virginia	G. B. Caldwell	Regular assistant	500 00
Wisconsin, western district	J. C. McKinney	Regular assistant	2,000 00

REPORT OF WARDEN OF THE UNITED STATES JAIL.

ANNUAL REPORT

OF THE

WARDEN OF THE UNITED STATES JAIL.

WASHINGTON, D. C., *November* 2, 1874.

SIR: The undersigned, warden of the United States jail in the District of Columbia, most respectfully presents his annual report, showing the management and condition of that institution during the year ending October 31, 1874, as required by the act of Congress approved March 5, 1872.

When my last annual report was submitted, it was hoped that the new jail-building, then in process of construction under a law of Congress, would have been completed and occupied previous to this time, but, I regret to state, such hope has not been realized.

The new jail is not yet completed, and we are still occupying the old building, which, with its wants of capacity, defective ventilation, and faulty construction, is but a poor apology for a jail, and would not be used as a place of incarceration of prisoners, only on account of absolute necessity.

It has been faithfully described heretofore, and often condemned by those in authority; therefore any further description of it is deemed unnecessary in this report. In order to occupy the building, some repairing has been necessary; but in view of the construction of a new building, no general repairs have been deemed advisable, and such only as were necessary for temporary purposes have been made.

The old building, which was intended to accommodate sixty or eighty persons, and was supposed to be crowded to its utmost capacity when its numbers were one hundred and fifty, has been required to accommodate two hundred and twenty-one at a time during the past year.

The health of the prisoners has been generally good. No contagious or epidemic disease has visited the institution during the year, and but one death has occurred. This, when we consider the crowded condition of the building, its faulty arrangements, and want of proper ventilation and sewerage, is a result truly gratifying, and has been produced, in a great measure, by the best of medical treatment and the most rigid sanitary measures. Lime and the chloride of lime and carbolic purifying-powders have been used as disinfectants; but lime in its simple form has been most relied on. Indeed, I have found by experience that pure lime sprinkled freely about the cells and corridors, and applied frequently as a whitewash on the walls, is the best conservator of health of any disinfectant we have used. Lime, when used in this form, even if only applied within a portion of the cells and rooms at a time, seems to permeate the atmosphere of the whole building and destroy its impurities and noxious influences. Hence, in addition to sprinkling lime throughout the cells and corridors daily, I have caused whitewashing to be carried on in some portion of the building more or less every week, with the gratifying results above mentioned.

The officers employed here, as a rule, have been vigilant and attentive to duty. The rules governing the institution have been carried into execution, and, as a consequence, I have the satisfaction of again stating in my annual report that, notwithstanding the unsafe, unreliable, and dilapidated condition of the jail-building, not a prisoner has escaped during the year; for which I render to the deputy-warden and guards well-merited commendation.

Several earnest Christian gentlemen, of the Young Men's Christian Association, have held religious exercises at the jail regularly every Sunday, which were attended by all the prisoners, who gave good attention, and seemed to appreciate their importance and to profit morally from the lessons inculcated. If the Christian people were more fully awake to the importance of continuing their efforts with this class after their discharge, and were to extend their operations by rendering them practical aid, through kindness and friendly advice, and assist them to obtain proper employment, a still greater benefit might be accomplished.

The prisoners have been supplied with wholesome and nutritious food in abundance, which has been carefully inspected by an officer before being served, thus leaving no room for any reasonable complaint on account of the quantity or quality of the rations. I believe the food issued in this prison to be equal in all respects to that of any similar institution in the country.

In regard to clothing, the rule has been to issue to such prisoners only as were destitute and had no means of procuring clothing for themselves. It is often difficult to determine just how far it is well to go in the matter of issuing clothing in a prison like this, where no remunerative labor is performed or required, in order to avoid inducements to the idle and profligate to get here.

A large portion of the prisoners are old offenders, whose faces have become familiar to the guards by reason of their having been repeatedly sentenced to the jail for misdemeanors, whose time during the year is spent partly in serving out sentences in jail and the remainder in vicious habits outside, thus rotating between the jail and their haunts of vice. When out they seldom labor or follow any useful employment, although they are generally strong and robust. Having but little pride of reputation, they would naturally feel that they would be the gainers if they were sent to jail occasionally to serve out a short sentence there, to be well fed and made comfortable, and each time to be furnished with a new suit of clothes. Such persons really have no claims upon the Government for clothing, yet this class of prisoners are always the most earnest in their demands for clothing, and loudest with their complaints if it is not speedily furnished. They often resort to manifold devices to procure it, and frequently deceive visiting officers of the Government and members of the grand jury in regard to their merits and necessities. To guard against deception from such evil practices, the deputy warden is specially charged, with the assistance of the guards, to examine and report from day to day such cases as are destitute and without means or friends to aid them, and they are supplied with clothing, so far as necessary to prevent suffering and to answer the ends of common decency. To do more, in my judgment, would be to encourage idleness and vice and lose sight of the purposes for which jails and prisons are established.

One of the serious obstacles in the way of the discipline and moral improvement of prisoners in this jail is the unavoidable necessity of herding them together in the corridors and rooms, where they pass their time in idleness, and where the vicious and confirmed criminals exert

a baneful influence upon those less advanced in the career of crime. There are no facilities in the building now in use for putting the prisoners at work, or conducting any business whereby their labor could be made profitable, and, indeed, if such facilities did exist, there is no law in force in this District to authorize the working of prisoners in jail.

In view of the early completion of the new jail-building, where there will be ample room for separating and classifying the prisoners, and excellent accommodations for placing them at some remunerative labor, I deem it of paramount importance that provisions be made by law to authorize the courts to sentence all prisoners to labor, who shall be tried and convicted, and whose term of imprisonment shall exceed ten days. Such is the law which prevails in other large cities, and I can see no good reason why it should not be enacted for this District. Prisoners then could be required to work within the jail or upon the premises at some kind of labor which could be made profitable, and thus in a great measure recompense the Government for the cost of their sustenance during the term of their imprisonment; thus, also, they would be kept from idleness and licentious practices which brood among prisoners when they have no other employment to occupy their time and divert their minds.

Hard labor in jail would also lessen its attractions to a certain class of offenders, and they would be more cautious about getting here. This would be likely to check the large increase to the numbers in jail which has been shown from year to year, and deter many from indulging in petty crimes, and cause them to seek some honorable employment. I believe if such a law were to be enacted and judiciously carried into practice, and also if provision were to be made for imprisoning here all such as are now sent to the penitentiary at Albany, N. Y., a sufficient income could be derived from the prison labor to defray all the expenses of the institution. A great moral reformation among the prisoners would also be secured, as it would afford greater facilities for reclaiming them and inspiring them with habits of industry, and lessen their opportunities for evil practices.

Your attention is respectfully directed to the report of the physician to the jail, hereto annexed, which contains a concise statement of the sanitary condition of the jail during the year.

The law requires the warden to transport to the penitentiary at Albany, N. Y., such prisoners as are convicted of penitentiary offenses and sentenced thereto, and to send to the Reform-School in the District of Columbia all who are sentenced by the courts to that institution. Therefore, the expenses incidental to such transportation are herein included, and amount to $1,501.54.

The annual salaries of physician, guards, and employés were $23,508.57

The expenditures on account of the jail during the year are as follows.

Subsistence of prisoners	$11,814 53
Medicines and delicacies for the sick	276 10
Lime and disinfectants	267 06
Beds, bedding, and clothing	2,874 87
Fuel, lights, painting, glazing, gas-fitting, and sewerage	2,541 84
Stationery, blanks, and blank-books	156 43
Furniture, stoves, hard, tin, and wooden ware, night-tubs, and cell-buckets	725 19
Repairs, and expense of execution	511 77
Horse keeping, shoeing, repairs on wagon and harness, ice, and miscellaneous articles	676 43

The daily average number of prisoners confined in jail during the year was 161.

The highest number in jail at one time was 221.

The lowest number in jail at one time was 116.
Total number in jail during the year was 1,928.

	Males.	Females.
There were in jail at the beginning of the year	104	14
Committed during the year	1,639	171
Total commitments, 1,810.		
There remained in jail at the close of the year	144	14
Sent to the penitentiary at Albany, N. Y	48	2
Sent to the Reform-School in the District of Columbia	42	0
Executed	1	0
Died	0	1
Pardoned by the President	12	0
Released during the year	1,496	1[illegible]

Prisoners received during the year were committed for offenses as follows:

	Males.	Females.
Murder	5	2
Arson	5	1
Rape	10	0
Burglary	32	0
Highway robbery	44	0
Bigamy	2	0
Forgery	10	0
Grand larceny	69	11
Petit larceny	691	61
Affray	35	2
Assault and battery with intent to kill	28	0
Horse-stealing	9	0
Embezzlement	5	0
Being incorrigible boy	10	0
Abortion	1	2
Obtaining goods under false pretenses	35	1
Vagrancy	10	1
Assault and resisting metropolitan police officers	53	1
Receiving stolen goods	4	0
Assault and battery	477	44
Assault	41	2
Stealing dead bodies	4	1
Cruelty to animals	1	0
Passing counterfeit money	1	0
Being the father of illegitimate child	2	
Fugitive from justice	1	0
Robbing internal revenue	4	0
Malicious mischief	3	0
Malicious trespass	26	2
Threats of personal violence	58	2
Keeping disorderly house	2	1
Keeping bawdy-house	1	11
Contempt of court	3	1
Bench-warrant	25	
Unlawfully carrying on bar-room	5	2
Unlawfully engaged as commercial agent	3	
Exposing for sale unwholesome meat	1	
Escape from Reform-School	3	0
Indecent exposure	1	
United States witnesses	4	1

Of those who were committed to jail as above stated, 1,134 were tried convicted, and sentenced for crimes, which are classified as follows:

	Males.	Females.
Manslaughter	5	0
Arson	4	0
Burglary and larceny	7	0
Robbery	4	0
Forgery	4	0
Grand larceny	19	2
Assault and robbery	2	
Assault with intent to kill	3	
Obtaining goods under false pretense	1	

	Males.	Females.
Horse-stealing	1	0
Resisting metropolitan police officers	32	2
Receiving stolen goods	5	0
Affray	38	7
Assault and battery	391	43
Petit larceny	365	72
Assault	2	2
Threats of personal violence	50	10
Malicious trespass	20	2
Contempt of court	3	2
Unlawfully carrying on bar-room	1	1
Removing dead bodies	1	0
Keeping bawdy-house	1	10
Unlawfully engaged as commercial agent	2	0
Indecent exposure	1	0
Exposing for sale unwholesome meat	1	0
Vagrancy	7	0
Idle and incorrigible boys	11	0

Very respectfully, your obedient servant,

JOHN S. CROCKER, *Warden.*

Hon. GEORGE H. WILLIAMS,
Attorney-General United States.

HOSPITAL DEPARTMENT UNITED STATES JAIL, D. C.,
Washington, November 1, 1874.

SIR: I have the satisfaction to report but one death during the past year, a case of embolism. Death occurred in a very short time, preceded by no symptoms or indication of disease, and no history could be obtained of her previous life to enable us to trace this result to an originating cause. Upon autopsy a clot of lymph, evidently not recent, was discovered in the right ventricle, part of which becoming detached, or a similar plug finding its way into the pulmonary arteries, causing death.

No epidemic has visited us this year, and we have been remarkably free from malarial disease, a few cases only occurring in those who had been exposed before entering the prison, and none amongst those who had been confined for some time. This exemption, while cases were occurring in various parts of the city, is fairly attributable to the locality of the jail, being unexposed to such exciting causes.

The usual number of diseases incident to the filthy habits and dissolute lives of the prisoners before entering have occurred, with, perhaps, an increase in venereal cases.

In cases of alcoholism and opium-eating, I have persevered in my usual treatment of immediate withdrawal of the poisonous agents, confining the use of alcohol to conditions of collapse. Few drugs are used, and reliance had mainly upon the bromide of potassium as a sedative, perfect quiet, and the introduction of nutritious food, with such means as insure elimination of the poison by the different emunctories. One prisoner who had been in the habit of using morphia to the extent of 12 grains daily, equivalent to 4½ ounces of laudanum, was subjected to the treatment, with the happiest results. In all cases they are restored in a few days to convalescence.

Frequent examinations have satisfied me of the abundance and good quality of the food and the sufficiency of bed-clothing furnished the prisoners.

Lime has been abundantly used as a wash, and a free use made of disinfectants. These, together with an abundant use of water and the prompt removal of all offal, have preserved perfect cleanliness throughout the prison. Our exemption from serious diseases, the usual consequence of overcrowding of human beings, is fairly attributable to these sanitary measures.

It gives me great pleasure to commend the vigilance and care of the guards in the performance of their duties to the sick. Every case of disease occurring has been promptly reported to me, and my orders faithfully carried out.

With great respect, I am your obedient servant,

N. YOUNG,
Physician United States Jail, D. C.

General JOHN S. CROCKER,
Warden United States Jail, D. C.

REFORM-SCHOOL OF THE DISTRICT OF COLUMBIA.

REPORT

OF

THE BOARD OF TRUSTEES OF THE REFORM-SCHOOL OF THE DISTRICT OF COLUMBIA.

WASHINGTON, *November* 4, 1874.

SIR: I have the honor to present my fifth annual report as president of the board of trustees of the Reform-School.

At the date of my last report, November 3, 1873, the buildings for which Congress had made a liberal appropriation were uncompleted. They are now finished; gas has been introduced; and the buildings are heated, when required to be, by hot water. As this mode of heating is found to be expensive, the board and Architect of the Capitol deemed it advisable to provide many of the rooms with grates for burning coal, by which they can be sufficiently warmed in mild weather, and especially when only a few rooms are to be used, with much less fuel than would be consumed by heating them with hot water.

The old dwelling-house, no longer needed as such, has been removed to the rear of the main building, and converted into a bakery and laundry.

We cannot boast of the amount of crops raised upon the farm or in the garden. The land is poor, the soil hard to till, and has been suffered to run down for want of proper cultivation and manuring, none of it being suitable for gardening. It will require several years of judicious management to get the ground into a condition to produce satisfactory crops. On this account and the want of water, without the constant use of a steam-pump, the location of the school on its present site was a most unfortunate mistake; but it is too late to rectify it, and we must now do the best we can with it; but time and money are both required to effect what we desire. The best we can do with the farm is to put the most of it in fruit and grass, reserving a portion for garden-purposes and for such vegetables as are required for daily consumption.

The grounds around the buildings have been partially laid out, and a quantity of fruit and ornamental trees ordered, which will be set out this fall and in the spring.

THE SCHOOL.

At the date of my last annual report there were in the school one hundred and thirteen boys; there are now one hundred and fifty-one; more, indeed, than we have accommodations for; and we have been obliged to give notice to the police court that no more must be sent by that court until further orders. Had we room for them, I do not doubt we should now have from two hundred to two hundred and fifty. Many

applications have been made to me to send boys to the institution, whom the parent or parents were unable to control, who are roaming about the streets and growing up in idleness; but in most cases I have been unable to comply with the wishes of the parent for want of room.

The condition of the school is highly satisfactory. The progress of the boys in their studies is very gratifying; they perform their labor on the farm, in the garden, and workshop with great cheerfulness; play during play-time with spirit, and appear to enjoy themselves. How great the contrast of this mode of life, where the boys' minds are constantly employed, from that from which they have been taken—wandering the streets out at late hours with bad company, perhaps now and then pilfering; at any rate, growing up in idleness and vice, candidates for penitentiaries and State prisons.

The boys are divided into two sections; one goes into the school-room in the forepart of the day, and the other upon the farm or garden or into the workshop. In the afternoon they reverse employments. Thus they work half the day and attend to their studies the other half. A Sunday-school is held on Sunday, and a religious discourse is made to them, usually by some person from the city visiting the school for that purpose. These addresses, intended to be adapted to the comprehension of the boys, are of a moral and religious character. The principles and precepts of the Christian religion and morals are taught, but especial care is taken not to give them any sectarian bias. The great object is to infuse into the minds of the boys right principles, moral and religious: to give them just ideas of right and wrong; of their duty to God and their duty to man; of right notions of labor and its necessity; in short, to prepare them for the duties of life. That this can be done with a large majority of this class of boys, our own limited experience and the greater experience of older and similar institutions furnish convincing proof. Allowing somewhat for hereditary qualities, boys are made what they are by the circumstances surrounding them, and the treatment they receive from their parents or those having or assuming authority over them. Example is everything with them; precept, without it, nothing. Hence the importance of removing them from the haunts of vice, the company of the depraved, and from bad examples, to an atmosphere of moral purity, where they see none but good examples.

To accomplish the purpose here indicated for the class of boys referred to, residing in this District, but more especially the city of Washington, was the great and benevolent purpose of those who were the founders and those who have labored to establish this institution; and it is a high source of satisfaction to them, as well as to others, that it is now firmly established and liberally sustained by Congress.

I cannot doubt that in years to come many a one rescued from vice and crime in his boyhood, by becoming an inmate of this institution, will devoutly thank God that he found a refuge from these and his evil companions in the Reform-School.

Those who visit the institution find it surrounded by no high walls. The grounds are inclosed by the same fence which has been in existence for many years—a common post-and-rail fence, five or six feet high. In the fields thus inclosed they may see fifty or sixty boys busily at work hoeing corn or potatoes or gathering the crops, all cheerful and happy. Why do they not escape? Only their teachers or the farmer or the gardner is with them, and how easy it would be for them to disperse and run. The reason they do not is they have no desire. There may be a few among them who would be glad to escape, but they know that if they were to attempt to do so the others would arrest their flight.

The best sentinels are the boys themselves. The secret of all this is, the boys are more happy, and of course contented, at the school than they have been outside of it, and they are not unconscious of the benefit they are deriving from being in the institution. Occasionally, however, boys escape, but are soon recovered and brought back, sometimes returning voluntarily. Let any one visit the school on Sunday, and note the countenances and behavior of the boys during the religious exercises. A brighter collection of faces can scarcely be seen anywhere, and nowhere a more orderly and attentive audience. Many of them, when first sent to the school have countenances more or less morose, surly, and expressive of malignity, revenge, and other brutal passions. But these countenances, it is observed, soon begin to change and assume a more pleasant expression, and in most cases the malicious expression in a few months wholly disappears. Thus is seen in the mirror of the face the change that is going on in the heart and mind of the neophyte.

As a general rule, these boys, not innately bad, had become disobedient, idle, and incorrigible, from bad government or none at all, and from being surrounded by evil influences and examples; the bane of our country, and especially our cities, being the entire want of parental government and wholesome parental influence. Removed from their vicious companions, and from an impure to a healthy moral atmosphere, and kept employed either in the school or in the field, and, moreover, being well clothed, lodged, and fed, they soon show the effect of these moral and physical influences and their religious teachings. Thus they are rescued from vice and degredation, and made worthy citizens.

SIMILAR SCHOOLS ELSEWHERE.

In my last report I gave a pretty full account of the reform-schools at Ruysselede, in Belgium, and Mettray, in France, the latter of which is the model we endeavor to follow.

These schools have become renowned for their great success in reforming juvenile offenders without turning keys upon them or exercising other than parental authority. They have demonstrated that *kindness* is a more effective means of reforming boys than *punishment*. No boy can be reformed without winning his confidence, and that cannot be won by harsh treatment or force. It is the gentle south wind and the penetrating beams of the sun that induce a man to doff his overcoat, while the fierce northern blast which endeavors to rudely tear it from him only makes him wrap it more closely around him.

Within a comparatively few years schools of this kind have been established in a considerable number of States, and have proved by the results flowing from them to be among the most valuable and useful of all our benevolent institutions.

MECHANICAL TRADES.

In the European reform-schools a great variety of mechanical trades are carried on, besides teaching the boys agriculture, horticulture, fruit-raising, &c., and such is the case in most, if not all, the reform-schools in the United States; but in regard to this I may repeat the language of my last report:

> For want of room for workshops we have been able, until quite recently, to employ but a few boys in mechanical work. There are now about thirty, mostly very small boys, employed in cane-bottoming chairs, and ten in tailors' shops making clothes for the inmates. We shall soon introduce other mechanical industries, on which the boys will

be employed during the winter. It is the intent of the board to have as many different kinds of mechanical business taught and carried on as possible. Most unfortunately for the country, but few boys who would learn trades can do so, for the reason that the trades-unions unwisely and tyrannically limit the number of apprentices which a master-workman may take. Every boy not born to a fortune should acquire some profession, trade, or employment on which he may depend for his own and the support of a family. But in this boasted "land of liberty" there are thousands of boys who would gladly learn some trade who cannot because they find the doors of mechanics' shops barred against them; and so they must grow up in idleness or seek such adventitious employment as they can find; perchance take Mr. Greeley's advice and "go West." We desire that every boy who leaves the institution shall be prepared to perform useful and skilled labor, and thus to feel and be a useful member of society.

A variety of mechanical employments might be carried on profitably at our institution, especially during the season when out-door work ceases; but as yet we have not, for want of means and other reasons, been able to establish them. We hope, however, by the favor of Congress, soon to be able to do this. We have asked for an appropriation to enable us to erect a building for workshops, and to purchase a steam-engine as a motive power, belting, machinery, &c. I call attention to the fact, stated by the superintendent, that up to the first of July of this year the boys had earned in a little more than six months $1,233.93 by caning chairs, done chiefly by the very small boys; but since then, owing to the general depressed condition of business, we have not been able to obtain any work of this kind. It is easy to see what they might have earned had we been able to obtain work for them.

ANOTHER FAMILY BUILDING NECESSARY.

I have stated that we have a greater number of boys in the institution now than we can properly accommodate; and, if we are to receive into the school all such as are sent to it by the criminal and police courts, and such incorrigible boys as parents cannot control, or those who are leading a life of idleness and vagabondage, we must have "more room;" that is, one or two more family buildings. A bill is now before the House of Representatives, reported favorably by the Committee on the District of Columbia, which provides for the commitment to this institution, by the direction of the Attorney-General, of such juvenile offenders as have been convicted of crimes against the United States, and as may better be detained here than elsewhere. Should this bill become a law, which is quite probable, two additional family buildings will become indispensably necessary.

MORE LAND NEEDED.

By the direction of the board of trustees, I have asked for an appropriation to purchase the remainder of the Dodge farm, consisting of about 120 acres. For various reasons, it is quite important that this should be acquired. It lies between the Reform-School farm and the Eastern Branch, to which access for the institution is desirable. It is harbor for most objectionable neighbors, who prowl about our premises at night; and as the number of inmates in the school is likely to be greatly increased with the increase of population in the District, more land for cultivation and the support of stock will be indispensable. The present is deemed a favorable moment to make this desirable acquisition.

ORIGIN OF THE SCHOOL.

Like most other humane and benevolent institutions, the Reform School had its origin in the efforts of a few gentlemen animated by a de-

sire to benefit an important class of society. The streets of our city were infested, as the streets of all our cities are more or less, by ungoverned and evil-disposed boys. To send them for petty crimes and misdemeanors to jail, was to send them where they would perfect themselves in crime by associating with old and hardened offenders. Better, in most cases, to turn the boy, when arrested and brought before the judge, into the street unpunished. And so it was done. A remedy for the evil was needed and found. Several years' labor, however, have been required to establish the school; and even after it was opened, more than once it came near failing for lack of the necessary means for its support. Fortunately these were obtained, and now we have the high satisfaction of knowing that it is at length permanently established and doing great good. The board of trustees feel assured that, under the judicious management of the superintendent, Mr. Howe, and with the generous aid it has received from Congress, it will compare favorably with any similar institution in the United States. Our ambition is that it shall become a model institution.

I have great pleasure in referring you to the accompanying reports of the superintendent and physician—to the former for valuable statistics and observations, and to the latter for the sanitary condition of the institution.

I have the honor to be, your obedient servant,

N. SARGENT,
President of the Board of Trustees of the Reform-School.

Hon. GEO. H. WILLIAMS,
Attorney-General.

REPORT OF THE SUPERINTENDENT.

To the Honorable Board of Trustees of the Reform-School of the District of Columbia:

GENTLEMEN: It has pleased a kind Providence to permit me to present to you my fifth annual report, which you will find in a condensed form in the following tables and statements:

TABLE No. 1.—*Showing the number received and discharged, and the general state of the institution, for the year ending November 1, 1874.*

Number of boys remaining in the institution November 1, 1873	113
Number received during the year	67
Whole number that have been in the institution during the year	180
Number discharged	27
Number escaped	2
Number remaining November 1, 1874	151

TABLE No. 2.—*Showing the ages of those admitted.*

Age.	No.	Age.	No.
Eight	2	Fourteen	15
Nine	2	Fifteen	19
Ten	3	Sixteen	2
Eleven	6	Eighteen	2
Twelve	4		
Thirteen	12	Total	67

TABLE No. 3.—*Showing the birthplace of those admitted.*

Birthplace.	No.	Birthplace.	No.
District of Columbia	36	Pennsylvania	
Maryland	11	England	
Virginia	16		
Ohio	1	Total	

TABLE No. 4.—*Showing parentage of those admitted.*

Nationality.	No.	Nationality.	No.
American, white	9	German	
American, colored	30	Italian	
English	6		
Irish	16	Total	

TABLE No. 5.—*Showing committals each month.*

Month.	No.	Month.	No.
November	5	June	
December	10	July	
January	1	August	
February	5	September	
March	9	October	
April	8		
May	3	Total	

TABLE No. 6.—*Showing cause of commitment.*

Cause.	No.	Cause.	No.
Incorrigible	37	Petit larceny	
Vagrancy	7	Grand larceny	
Assault and battery	2		
Forgery	2	Total	

TABLE No. 7.—*Showing source from which those admitted were received.*

Police court	
President of the board of trustees	

TABLE No. 8.—*Showing the moral and social condition of the inmates on entering the institution.*

Number who came under assumed names	
Number who had used tobacco	
Number who had used profane language	
Number who had used intoxicating liquors	
Number who had been guilty of larceny	
Number who had lost both parents	
Number who had lost father	
Number who had lost mother	
Number whose parents are both living	

TABLE No. 9.—*Classified statement of expenditures for the reform-school for the year ending November 1, 1874.*

For salaries and wages	$6,509 43
For support	6,203 04
For fuel	3,307 01
For clothing and bedding	2,939 55
For hardware, china-ware, &c	266 03
For blacksmithing and repairing	156 33
For agricultural implements and seeds	217 87
For books and stationery	129 81
For incidental expenses	399 57
For medical attendance and medicines	203 98
For sewing-machine, needles, &c	84 78
For plumbing, glass, and paints	90 59
For furniture and carpets	4,906 24
For horses and harness	350 00
Cash paid over to G. B. McCartee	714 30
Total	26,478 53

TABLE No. 10.—*Detailed statement of the expenditures for the reform-school for the year ending November 1, 1874.*

Date.	To whom paid.	On what account.	Amount.
1873.			
Nov....	Grunnebaum & Co.	Boys' caps	$57 75
	R. Brooke & Son	Boys' shoes	224 00
	N. W. Barrow	Coal	561 59
	William R. Riley	Cloth	645 69
	F. W. Howe	Salary	125 00
	S. C. Mullin	do	62 50
	C. H. Johnston	do	62 50
	Lottie A. Howe	do	50 00
	D. C. Mosher	do	50 00
	B. C. Maris	do	50 00
	Thomas Mitchell	do	50 00
	Perry Jones	Wages	14 00
	Mary Karns	do	15 00
	Charlotte Tracy	do	12 00
	Alice Nichols	do	12 00
	Mary O'Riley	do	12 00
	Sarah Wilding	do	12 00
Dec	J. C. Wiswall	Woolen sacks	28 50
	William R. Riley	Dry goods	191 59
	Thomas H. Joy	Beef	207 12
	E. G. Davis	Sundries	7 85
	George Nero	Labor	1 25
	F. W. Howe	Incidental expenses	8 06
	Baltimore and Ohio Railroad Co.	Freight	8 02
	N. W. Burchell	Groceries	205 83
	William Sollers	Bread	373 18
	Hall & Hume	Provisions	439 62
	C. Muller & Son	Confectioneries	11 69
	N. W. Barrow	Ice	5 08
	L. H. Carlton	Hay	26 00
	Benjamin Spilliards	Oysters	6 00
	J. H. Baker	Sundries	15 12
	Webb & Beveridge	Crockery	20 15
	G. W. Cadwallader	Reward	100 00
	T. R. Hackett	Boarding-house	4 00
	William F. Lee	Advertising	5 00
	Western Union Telegraph Co.	Telegraphing	2 82
	Washington post-office	Box-rent	1 57
	Baltimore and Ohio Railroad Co.	Freight	3 10
	F. W. Howe	Expenses pursuing horses	15 95

TABLE No. 10.—*Detailed statement of the expenditures, &c.*—Continued.

Date.	To whom paid.	On what account.	Amount.
1874.			
Dec	D. C. Mosher	Expenses pursuing horses	$23 64
	B. C. Maris	do	15 1
	Louxman & Long	Blacksmithing	20 75
	F. W. Howe	Salary	125
	S. C. Mullin	do	62 5
	C. H. Johnston	do	62 5
	L. A. Howe	do	50
	D. C. Mosher	do	50
	B. C. Maris	do	50
	Thomas Mitchell	do	50
	Perry Jones	do	14
	Mary Karns	Wages	15
	Charlotte Tracy	do	12
	Alice Nichols	do	9
	Sarah Wilding	do	12
	Mary Selvey	do	12
	R. A. Mosher	do	2 4
1874.			
Jan	R. Brooke & Son	Boys' shoes	102
	J. E. Johnson	Repairing shoes	45
	W. R. Riley	Dry goods	91
	Lewis Baar	Sewing-machine	60
	Jacob Gurinder	Chair-needles	4
	Hamilton & Pearson	Gas-pipe	1
	Andrew Joyce	Repairing buggy	2
	G. W. McElfresh	Arresting boy	6
	D. C. Mosher	Fugitive expenses	1
	J. A. McDevitt	Expenses	1
	F. W. Howe	Incidental	4
	do	Salary	12
	S. C. Mullin	do	62
	C. H. Johnston	do	62
	L. A. Howe	do	5
	D. C. Mosher	do	
	B. C. Maris	do	
	Thomas Mitchell	do	
	Perry Jones	do	14
	Mary Karns	do	15
	Charlotte Tracy	Wages	12
	Alice Nichols	do	12
	Sarah Wilding	do	12
	Mary Selvey	do	12
Feb	J. E. Johnson	Repairing shoes	4
	Thomas Keech	Medical attendance	2
	William R. Riley	Dry goods	
	N. W. Barrow	Coal	
	R. Brooke & Son	Shoes	
	J. E. Johnson	Repairing shoes	
	Robert Ball	Shoe-strings	
	J. S. Killmon	Coal	
	T. J. Edwards	Plumbing	
	F. W. Howe	Incidental expenses	
	Baltimore and Ohio Railroad Co.	Freight	
	F. W. Howe	Salary	1
	S. C. Mullin	do	
	C. H. Johnston	do	
	L. A. Howe	do	
	D. C. Mosher	do	
	B. C. Maris	do	
	Thomas Mitchell	do	
	Perry Jones	Wages	1
	Mary Karns	do	
	Charlotte Tracy	do	1

TABLE No. 10.—*Detailed statement of the expenditures, &c.*—Continued.

Date.	To whom paid.	On what account.	Amount.
1874.			
Feb	Alice Nichols	Wages	$12 00
	Sarah Wilding	do	12 00
	Mary Selvey	do	9 20
	E. F. Simpson	Repairing stoves	15 90
	William Sollers	Bread	464 40
	Lauxman & Long	Blacksmithing	42 24
	Thomas H. Joy	Beef	229 65
	Webb & Beveridge	China-ware	51 15
	Charles Stott & Co	Medicines	32 90
	George Ryneal	Glass	8 20
	National Bank of the Republic	Check-book	2 50
	J. A. Baker	Sundries	45 05
	William Ballantyne	Books	42 89
	K. Kneesi	Repairing harness	25 00
March..	Thomas H. Joy	Beef	126 00
	Robert Clark	Hay	29 75
	H. S. Carlton	do	32 25
	L. H. Schneider	Hardware	6 02
	J. E. Carpenter	Stationery	5 00
	T. J. Price	Carriage-hire	15 00
	F. W. Howe	Incidental expenses	3 10
	Royal Tyler	Medical attendance	5 00
	F. W. Howe	Salary	125 00
	S. C. Mullin	do	62 50
	C. H. Johnston	do	62 50
	L. A. Howe	do	50 00
	D. C. Mosher	do	50 00
	B. C. Maris	do	50 00
	Thomas Mitchell	do	50 00
	George Mackwell	do	14 00
	Mary Karns	do	15 00
	Alice Nichols	do	12 00
	Mary Joseph	do	12 00
	Sarah Ashton	do	12 00
	Delia Mathews	do	12 00
April...	Thomas H. Joy	Beef	108 00
	J. S. Killmon	Coal	200 00
	Washington post-office	Box-rent	1 57
	T. J. Price	Carriage-hire	15 00
	Baltimore and Ohio Railroad Co.	Freight	12 57
	F. W. Howe	Incidental	3 74
	M. H. Prince	Shears	1 00
	G. W. Coldenstrath	Cabbages	12 00
	F. W. Howe	Salary	125 00
	S. C. Mullin	do	62 50
	C. H. Johnston	do	62 50
	Lottie A. Howe	do	50 00
	D. C. Mosher	do	50 00
	B. C. Maris	do	50 00
	Thomas Mitchell	do	50 00
	George Mackwell	do	14 00
	Mary Karns	do	15 00
	Alice Nichols	do	12 00
	Mary Joseph	do	12 00
	Sarah Ashton	do	12 00
	Delia Mathews	do	12 00
May	Thomas H. Jay	Beef	117 00
	H. L. Carlton	Hay	29 87
	W. H. Marshall	Thienes	2 90
	R. Austrian & Co	Boys' caps	66 00
	F. W. Howe	Salary	125 00
	S. C. Mullin	do	62 50
	C. H. Johnston	do	62 50

TABLE No. 10.—*Detailed statement of the expenditures*—Continued.

Date.	To whom paid.	On what account.	Amount.
1874.			
May	L. A. Howe	Salary	$50 00
	D. C. Mosher	do	50 00
	F. Westby	do	38 7
	C. M. McKinley	do	50 00
	George Mackwell	Wages	14 00
	Elvira Westby	do	7 50
	Mary Karns	do	7 50
	Alice Nichols	do	12 00
	Sarah Ashton	do	12 00
	Mary Joseph	do	12 00
	Delia Mathews	do	12 00
	Thomas Keech	Medical attendance	16 5
	Grafton Tyler	do	10 00
	J. E. Carpenter	do	25 00
	Charles Stott & Co	Medicines	39 0
	J. S. Killmon	Coal	133 42
June ...	Thomas H. Joy	Beef	276 1
	Baltimore and Ohio Railroad Co.	Freight	7 1
	F. W. Howe	Incidental expenses	4 14
	E. G. Davis	Machine-oil	6
	Thomas H. Joy	Strawberries	1 5
	F. W. Howe	Salary	125 00
	S. C. Mullin	do	62 5
	C. H. Johnston	do	62 5
	L. R. Howe	do	50 00
	D. C. Mosher	do	50 00
	F. Westby	do	50 00
	C. M. McKinley	do	50 00
	George Mackwell	do	14
	Elvira Westby	do	15 00
	Alice Nichols	do	12 00
	Sarah Ashton	do	12
	Mary Joseph	do	12 00
	Delia Mathews	do	6 00
	Mary Hausell	do	6 00
July ...	Washington post-office	Box-rent	1 00
	Baltimore and Ohio Railroad Co.	Freight	6 2
	F. W. Howe	Incidental expenses	2 5
	Green & Williams	Furniture	77 5
	William Ballantyne	School-desks	125 00
	J. E. Johnston	Repairing shoes	4 00
	F. W. Howe	Salary	125 00
	S. C. Mullin	do	62 5
	C. H. Johnston	do	62 5
	L. A. Howe	do	9
	D. C. Mosher	do	7 5
	F. Westby	do	6
	C. M. McKinley	do	5
	John Blain	do	25
	George Mackwell	do	14
	Elvira Westby	do	15 00
	Alice Nichols	do	12
	Mary Joseph	do	12
	Mary Hausell	do	12
	Mary O'Riley	do	12
August.	N. W. Burchell	Provisions	35 5
	Webb & Beveridge	Crockery	6
	Hall & Hume	Provisions	24 5
	W. M. Galt	Flour	62 5
	William Sollers	Bread	146 5
	George Ryneal	Paints	14 5
	Thomas H. Joy	Beef	15 5
	J. A. Baker	Garden-seeds	1 00

TABLE NO. 10.—*Detailed statement of the expenditures*—Continued.

Date.	To whom paid.	On what account.	Amount.
1874.			
August.	T. J. Edwards	Plumbing	$23 45
	L. H. Carlton	Mill-feed	95 00
	G. W. Coldenstrath	Cabbage	29 75
	Wheatley Bros.	Lumber	11 99
	F. W. Howe	Incidental	4 72
	J. S. Killmon	Coal	1,546 00
	Petty & Harvey	Hats	24 00
	Louxman & Long	Blacksmithing	69 02
	William R. Riley	Dry goods	437 70
	F. W. Howe	Salary	125 00
	S. C. Mullin	do	62 50
	C. H. Johnston	do	62 50
	L. A. Howe	do	50 00
	D. C. Mosher	do	50 00
	F. Westby	do	60 00
	John Blain	do	50 00
	John Talbert	Wages	14 00
	Elvira Westby	do	15 00
	Alice Nichols	do	12 00
	Mary Hansell	do	12 00
	Mary O'Riley	do	12 00
	Mary Joseph	do	12 00
Sept.	Hall & Hume	Provisions	192 35
	W. M. Galt	Flour	20 00
	N. W. Burchell	Groceries	64 39
	William Sollers	Bread	292 81
	Thomas Joy	Beef	148 83
	William Ballantyne	Books	84 42
	H. L. Carlton	Mill-feed	153 85
	E. G. Davis	Repairing sewing-machine	13 88
	Lewis Baar	do	10 90
	F. W. Howe	Incidental expenses	28 05
	William Sollers	Bread	279 00
	W. B. Williams	Furniture	3,656 64
	W. S. Mitchell & Co	Carpets	345 78
	J. A. Baker	Agricultural implements	109 37
	Charles Stott & Co	Medicines	7 90
	Thomas Keech	Medical attendance	6 00
	T. B. Hood	do	25 00
	Charles Stott & Co	Medicines	10 68
	Wall, Robinson & Co	Cloth	500 00
	William R. Riley	Dry goods	221 14
	F. W. Howe	Salary	125 00
	S. C. Mullin	do	62 50
	C. H. Johnston	do	62 50
	L. A. Howe	do	50 00
	D. C. Mosher	do	62 50
	F. Westby	do	60 00
	John Blain	do	50 00
	John Talbert	do	50 00
	William Ruth	do	8 67
	E. Y. Ward	do	20 83
	Ann E. Ward	do	3 00
	Elvira Westby	do	7 50
	Alice Nichols	do	12 00
	Mary Joseph	do	12 00
	Mary Hansell	do	12 00
	Mary O'Riley	do	12 00
Oct.	Lauxman & Long	Blacksmithing	24 37
	H. L. Carlton	Mill-feed	166 00
	L. H. Schneider	Hardware	6 21
	Hall & Hume	Provisions	286 02
	N. W. Burchell	do	95 30

TABLE No. 10.—*Detailed statement of the expenditures*—Continued.

Date.	To whom paid.	On what account.	Amount.
1874.			
Oct.....	F. W. Howe.....	Money paid Hopkins & Yales for horses.	$325 00
	Thomas H. Joy.....	Beef.....	140 47
	E. F. Mudd	Tailoring	30 00
	F. W. Howe.....	Salary	125 00
	S. C. Mullin.....	.....do.....	62 50
	C. H. Johnston	.....do.....	62 50
	L. A. Howe	.....do.....	50 00
	D. C. Mosher.....	.....do.....	62 50
	F. Westby	.....do.....	60 00
	John Blain	.....do.....	50 00
	John Talbert	.....do.....	50 00
	Ann E. Ward	.....do.....	15 00
	E. Y. Ward	Wages.....	12 33
	Alice Nichols	.....do.....	12 00
	Mary Joseph.....	.....do.....	12 00
	Mary O'Riley	.....do.....	12 00
	Mary Hansell.....	.....do.....	12 00
	Total expenditures.....	.....	25,764 23

TABLE No. 11.—*Showing the amount of money received during the year.*

Cash on hand November 1, 1873.....	$274 65
Received from United States Treasury for salaries and wages.....	4,044 70
Received from United States Treasury for general expenses.....	3,649 22
Received from District of Columbia for support of inmates.....	2,356 00
Received for cane-seating chairs.....	1,283 [illegible]
Received for board.....	400 00
Received for income from stock.....	27 00
Received for rags.....	[illegible] 25
Received for grease.....	3 00
Received of George B. McCartee for salaries and wages.....	2,307 [illegible]
Received of George B. McCartee for general expenses.....	7,108 [illegible]
Received of George B. McCartee for improvements.....	109 [illegible]
Received of George B. McCartee for medical attendance.....	49 [illegible]
Received of George B. McCartee for furniture.....	4,[illegible]
Total.....	26,47[illegible]

REMARKS.

The labors of another year are passed. When we look back upon those labors among boys disposed to do wrong, boys that were the terror of the communities in which they lived, those who showed on their bad faces the condition of their hearts, boys that were naturally depraved from vicious parentage and cruel neglect, and those that have been spoiled by undue indulgence by kind parents, our hearts are made to rejoice by the acknowledged gratitude of these boys for their improved condition, and for having been snatched from the jaws of pollution and ruin, which were open wide to engulf them. With many of these boys the chain-gang, the jail, filthiness and rags, idleness and shame, have been exchanged for wholesome food, cleanliness, steady habits, industry, good manners, education, and a knowledge of Christianity. These influences upon these unfortunate boys, in connection with the love and deep interest manifested toward them by the officers

and teachers, forgiving their offenses, and meeting their indifferences and stubbornness with kind reprimands and instructions, have gained from them a cheerful obedience to all requirements, and developed a sense of moral principle in them to such a degree in most instances as has won their love and respect for the institution that has saved them. The results of the year's operations cheer and strengthen us, and we are only sorry that the opportunities offered by the Reform-School cannot reach a larger number, for hundreds are perishing for want of restraint and moral teachings such as are furnished by it. Earnest and numerous have been the entreaties for us to receive bad boys, who are beyond the control of their parents, but for want of room we have been able to take but a few compared with the number for whom admission has been sought. We desire to call your attention to the great necessity of providing more room at the earliest possible moment. In our opinion, at least two family buildings should be erected at once.

OUR SCHOOLS.

The school for intellectual training has been in session the entire year, devoting four hours and a half each day to study. The advancement made in this department is very gratifying to us. It is true, a majority of these boys on entering the institution are very ignorant, many of them not knowing their letters, and the subject of educating them is one of the first importance with us, although they have been rejected from other schools or have been wandering outcasts of society, without a home to shelter them, or kind friends in whom they could confide, or to whom they might look for protection. Still we find they have active minds, and are capable of making praiseworthy intellectual advancement, and we feel confident our record will compare with other schools of the country.

MORAL AND RELIGIOUS CULTURE.

Our efforts in this direction have been crowned with as much success as in any former year. We consider the Word of God the only foundation upon which a true reformation can stand. Great good has been done to the boys, we believe, by the religious and moral exercises of the institution.

SANITARY CONDITION.

We are under renewed obligations to our Divine Master for His protecting care, and for giving us health and strength through the past year. For a more explicit statement, I respectfully refer you to the report of Dr. T. B. Hood, the attending physician.

THE FARM AND CROPS.

We are sorry not to be able to make a better exhibit of farm-products. Much labor and attention have been given to the farm and garden, but we find our sterile lands will not produce largely under the most thorough cultivation. The dry weather and potato-bugs caused an entire failure of our crops of late potatoes. Our corn also was much injured by the drought. The garden has yielded moderately well, supplying our tables abundantly with vegetables, and we have a supply on hand sufficient for winter use.

SHOPS.

Our chair-shop thus far has proved a success, having furnished work for a class of boys too small to be profitably employed upon the farm. We received $1,233.93 for labor performed in this shop to July 1, since which time the shop has been closed for want of work. We have now made partial arrangements for all the work we can do, and hope soon to have the shop re-opened. We would earnestly recommend the erection of a suitable shop-building, that not only cane-seating can be profitably carried on, but that other branches of industry may be introduced.

Since July the shop force have been employed in grading the lawns, &c., which would have cost the institution at least $1,000 had it been done by contract.

ACKNOWLEDGMENTS.

We are indebted to the president of the board for many volumes of agricultural books, reports, and publications.

A. B. Gruner, esq., has sent us the Mutes' Chronicle, Ohio Statesman, and Lancaster Gazette for the past year, for which he has our thanks.

We are also under obligations to the editor of the Daily Morning Chronicle for a daily copy of that valuable paper. We also thank the Christian Association of Washington for 130 copies weekly of Our Home Paper. We tender our thanks to the officers and employés of the institution who have so cheerfully aided us, and who have so earnestly labored for the best interests of the school. And again, as in former years, would we express our gratitude to the trustees of the school for the uniform kindness shown us at all times, and for the undivided sympathy and support we have ever received from them in our arduous labors. We would not close without expressing our heartfelt thanks to Him who hath so carefully watched over and kept us from harm, and may our heavenly Father continue to smile upon us and prosper all our efforts for good.

Most respectfully, your obedient servant,

F. W. HOWE,
Superintendent.

TEACHER'S REPORT.

To the honorable Board of Trustees of the Reform-School:

GENTLEMEN: The following report exhibits the condition and operations of the reform-school during the year ending November 1, 1874:

Number of pupils November 1, 1873	11[illegible]
Number received during the year	[illegible]
Number discharged during the year	[illegible]
Number remaining in the school to date	15[illegible]

Table showing the mental condition of the inmates when received.

Did not know the alphabet	34	Could not write	12
Could not read	38	Could write legibly	21
Could read only	39	Could write well	2[illegible]
Could read well	21	Ignorant of geography	12
Ignorant of arithmetic	120	Ignorant of grammar	11

Table showing the mental condition of those remaining in the school.

Alphabet	4	First lessons in geography	14
Spell only	16	Manual of geography	45
First reader	13	Intermediate geography	17
Second reader	21	Grammar	17
Third reader	30	Mental arithmetic	86
Fourth reader	48	Practical arithmetic	76
Fifth reader	19	Penmanship	114

The advancement of the boys under our care during the past year has been very gratifying to us, not only in their studies but in ther general deportment also. We feel justified in saying that the greater number of boys in the school for the last year have shown a thirst for general knowledge and an indefatigable industry in obtaining it.

We have endeavored to awaken their faculties to their fullest extent, and to inspire them with pure and high principles, and prepare them to lead a useful and honorable life after leaving the institution. It is necessary for us to impart to them a zest for accurate attention to all their duties, whether in school, at work, or play, as it will have a tendency to strengthen and discipline their minds, and to awaken in them a spirit of self-reliance and self-perseverance which will promote their success in after life.

In conclusion, we would express our thanks to our superintendent (to whom we refer in all our trials and successes) for approval and encouragement; also to the honorable board of trustees for words of counsel. Trusting in Him who is the Great Ruler of us all, I respectfully submit this report.

S. C. MULLIN.

GARDENER'S REPORT.

REFORM-SCHOOL, *October* 20, 1874.

To the Board of Trustees:

GENTLEMEN: I respectfully submit the following report. I commenced my labors as gardener the 10th of May, too late to raise many early vegetables. The garden-force consists on an average of eighteen boys; one half labor in the morning and the other half in the afternoon. They have generally performed their duties well, have been respectful in demeanor, and prompt in obeying orders. The strict discipline and habits of industry daily inculcated by the superintendent renders my task comparatively an easy one. I am much interested in the welfare of the boys under my charge, and strive to lead them to aspire to become good and respectable members of society.

May God bless this institution to the good of the youth intrusted to its care.

With respect,

FRANCIS WESTBY.

(See accompanying tables for amount of products.)

LIST OF GARDEN-PRODUCTS.

Beets, 16 bushels	$24 00
Cabbage, 590 head	47 20
Cucumbers	15 00
Carrots	2 00
Green corn, 200 dozen	24 00

Lettuce	$10 00
Onions, 45 bushels	90 00
Potatoes, 195 bushels	195 00
Radishes	12 00
Spinach	5 00
Snap-beans	12 00
Sweet potatoes, 58 bushels	58 00
Turnips, 200 bushels	160 00
Lima beans	
Squashes and cymblins	
Green pease, 15 bushels	
Tomatoes, 80 bushels	

FRUITS.

Blackberries, 480 quarts	
Strawberries, 40 quarts	
Cantaleups, 370	
Total	$45 00

LIST OF FARM AND ORCHARD PRODUCTS.

Apples used in kitchen-cider	$20 00
Apples gathered in fall, 21 barrels	42 00
Rye, 200 bushels, at 90 cents	180 00
Corn, 600 bushels, at 50 cents	300 00
Beans, 24 bushels	60 00
Hay, 3 tons	60 00
Straw, 7 tons	150 00
Corn-fodder, 12 tons	120 00
Pears, 3 bushels	
Broom-corn, ½ ton	200 00
Pork, 200 pounds	140 00
Cherries, 10 bushels	40 00
	1,312 00

REPORT OF THE PHYSICIAN.

WASHINGTON, D. C., *October* 31, 1874.

To the President of the Reform-School of the District of Columbia :

SIR: As the physician of the Reform-School, I have the honor to report that during the short term of my connection with it the health of the inmates has been extraordinarily good. Indeed, the whole number of cases requiring treatment have not exceeded a dozen, and these all of one class of miasmatic origin, intermittent fever, and exclusively of the tertian type. None of these were treated for more than a few days, and all ended in recovery.

Upon the assumption of my duties I immediately proceeded to the inspection of the buildings, including the school-room and dormitories, and to ascertain the quantity and quality of the food supplied to the inmates. The only objection to the site of the building lies in the fact that it is exposed to the miasmata rising from the bed of the Eastern Branch of the Potomac, the estuary of which is seen lying to the southwest. The recession of the tides exposes a large amount of decaying vegetable matter, mingled with a greater or less amount of animal matter during the summer and fall, to the direct heat of the sun. The production of miasmata is inevitable, and these are carried by the prevailing southerly and southeasterly winds to the crown of the hill upon which the buildings are located. I suggest, as an important means of protection, the planting on the southerly side of the hill a number of

forest-trees of large growth. These, after a few years, would afford very great, if not perfect, protection from this source of disease, as experience has demonstrated the power of a body of trees to protect under such circumstances. The dietary of the school, as I saw it in the material upon the tables, leaves little, if anything, to be desired. There is a proper proportion of meats and vegetables representing the nitrogenous and non-nitrogenous foods, possibly an excess of the carbonaceous or fatty elements. The appearance, however, of the inmates, which is certainly very creditable to the management, proves that they are properly and sufficiently fed. I found the cooking also to be perfectly satisfactory. The dormitory in the detached building lying to the north of the main building was carefully inspected. It was clean, the beds and bedding clean, and in every way satisfactory. There is no doubt, however, that it is insufficient for the existing number of inmates, (140,) if proper precautions against disease are to be taken, and particularly during the winter-months, when, in consequence of the cold, the ingress of air will necessarily be reduced to the minimum. In order to the preservation of health, at least 1,000 to 1,200 cubic feet of air should be allowed to each person. In the calculation made, I found that the number which the superintendent, Mr. Howe, was compelled to put in this dormitory would not allow more than 500 to 600 feet to each person. With properly-enforced ventilation, however, for which, I regret to say, the architect has not sufficiently provided, it is scarcely probable that any serious results will ensue.

It cannot be expected that the health of the inmates will remain for the future so entirely good as during the two months of my connection with the school, and I urge the propriety of providing hospital accommodations of all characters for a small number, say, ten or twelve persons, so that when the necessity shall arise all confusion may be obviated. As matters now exist, a case of typhoid fever or a fractured limb could not be properly cared for nor properly isolated from the remainder of the institution. I may add, in conclusion, that I have been most highly pleased with the management of the school. The buildings are kept in good condition—clean and well ventilated, and the inmates well fed, comfortably and properly clad, and by their manners and appearance give evidence of thorough care and wholesome discipline. I regard the school as equally a credit to the trustees and superintendent.

Very respectfully, your obedient servant,

T. B. HOOD, *Physician.*

REPORT OF THE BOARD OF METROPOLITAN POLICE.

H. Ex. 7——5

THIRTEENTH ANNUAL REPORT

OF THE

BOARD OF METR POLITAN POLICE.

DEPARTMENT OF METROPOLITAN POLICE,
OFFICE OF THE BOARD,
Washington, D. C., November 16, 1874.

To the ATTORNEY-GENERAL:

SIR: In compliance with a provision of the act of Congress approved March 3, 1873, making appropriations for sundry civil expenses of the Government, which requires that their annual report "shall hereafter be made to the Attorney-General of the United States," the Board of Police of "the Metropolitan Police District of the District of Columbia" respectfully submit their thirteenth annual report of the condition of the police within said district for the year ending September 30, 1874.

THE FORCE.

The regular force has not been numerally changed during the past year, and, as at present constituted, has been kept up to the maximum number authorized by law. It consists of two hundred and thirty-eight members, including officers and privates, as follows, viz:

Major and superintendent	1
Captain and inspector	1
Lieutenants	10
Sergeants	20
Privates or patrolmen	200
Detectives	6
Total	238

There are also in the employment of the board, under the authority of law, the following officers:

Secretary of the board	1
Property-clerk	1
Clerks	3
Surgeons	3
Messenger	1
Laborers	9

The board has also commissioned, as authorized by law, seventy-three persons as additional privates to do duty in various localities, at the expense of the parties making application for their appointment.

DISPOSITION OF THE FORCE.

At the central office, with duties extending throughout the entire District of Columbia, the following officers are assigned, viz:

Major and superintendent	1
Captain and inspector	1
One lieutenant, (as hack inspector)	1
Six detectives	6
One lieutenant and four privates as sanitary officers	5

For the purposes of a perfect and effective police surveillance, the Dis-

trict of Columbia is divided into eight precincts. Their location and boundaries are as follows, viz:

First precinct.—That part of Washington known as "South Washington," exclusive of the grounds surrounding the Smithsonian Institution, comprises this precinct, and reaches on the north to the former line of the canal, except where it binds on the southern limits of the grounds immediately surrounding the Smithsonian Institution; easterly extends along the line of the canal to where it intersects with South Capitol street, whence said street is the eastern boundary to the Potomac. The Potomac River forms its southern and western boundary.

Second precinct.—All of the city of Washington lying north of N and Boundary streets north, and that section of the county of Washington embraced between the Anacostia and Rock Creek, comprise this precinct.

Third precinct.—Georgetown, and that section of the county of Washington lying between Rock Creek and the Potomac, together with Analostan Island, are included in this precinct.

Fourth precinct.—That portion of Washington lying west of Fifteenth street and south of N street north is embraced in the fourth precinct.

Fifth precinct.—This precinct extends from Seventh to Fifteenth street, northwest, and from the former line of the canal north to H street, and also includes the grounds immediately surrounding the Smithsonian Institution.

Sixth precinct.—The extent of this precinct is from H to N street north and south, being bounded on the west by Fifteenth street, and reaching east as far as Seventh street, northwest, and running north along that street from its intersection with G street to New York avenue; thence in a northeasterly direction along New York avenue to N street.

Seventh precinct.—The boundaries of this precinct are Seventh street, northwest, from the former line of the canal north to New York avenue, and the line of the canal and Maryland avenue on the south and southeast, and extends north to New York avenue and Boundary street.

Eighth precinct.—This precinct includes that part of the city of Washington lying east of the former line of the canal and south of Maryland avenue, from Third street, southwest, to the intersection of the canal with South Capitol street, thence south to the Potomac River, and also that section of the county of Washington lying southeast of the Anacostia River.

To each of these precincts assignments of officers and privates are made as follows, viz:

First precinct—1 lieutenant, 2 sergeants, and 26 privates	29
Second precinct—1 lieutenant, 2 sergeants, and 21 privates	24
Third precinct—1 lieutenant, 3 sergeants, and 21 privates	25
Fourth precinct—1 lieutenant, 2 sergeants, and 22 privates	25
Fifth precinct—1 lieutenant, 3 sergeants, and 25 privates	29
Sixth precinct—1 lieutenant, 2 sergeants, and 25 privates	28
Seventh precinct—1 lieutenant, 3 sergeants, and 30 privates	34
Eighth precinct—1 lieutenant, 3 sergeants, and 25 privates	29
Total	225

Of the above number there are permanent details assigned to special duty as follows, viz:

At the Executive Mansion	1
At the police-court	2
At the railroad-depots	4
At police-headquarters, as telegraph-operators, &c	5
At each of the station-houses, (eight in all,) as station-keepers and telegraph-operators, 2 privates	16
Total details	28

In its last annual report the board of police, referring to the special demands for police service, held language illustrative of the necessity of an increased force for this District, which is applicable at the present time, and as the needed increase was not realized at the last session of Congress, its propriety is again submitted. In fact, an increase of population and wealth, with our onward march in the progress of events, should add greater and more urgent emphasis to that presentation, which was substantially as follows, viz:

Deducting the permanent details from the 200 privates, the maximum number of patrolmen allowed by law, it will be seen that we have but 174 privates remaining for regular patrol-duty. The population of the District, as shown by the census of 1870, is 131,700; and comparing the population with the number of officers, as shown by the last statement, it will be observed that there is an approximate average of one policeman to each 750 of our inhabitants.

There can be no doubt that at the present time our population amounts to fully 150,000, which, divided by 174, the number of active patrolmen, gives one private to every 900 inhabitants, very nearly. And if we take into the estimate the fact that we have constantly in our midst a large number of transient residents, it will be safe to state that we have but one patrolman to each 1,000 inhabitants. It may be well to note that large detachments are continually made from the patrol-force, during the winter season, to attend at public receptions of officers of the Government, foreign embassadors, prominent citizens, and residents at our capital.

The demands upon the force from these causes are so pressing that frequently it is found necessary to almost entirely uncover our streets, leaving but three or four policemen to guard entire precincts, and that, too, at night, and during a season of the year when police surveillance should be most strict and effective.

It is estimated that, under ordinary circumstances, the numerical strength of a police-force should be one policeman to each 500 inhabitants. This estimate is, however, for densely-populated cities, and would be no fair criterion for population spread out and scattered as within this District, with an incidental population also drawing largely upon the force for the preservation of order on public occasions.

The special design of a police-force is the preservation of order and the prevention of crime. This object can only be attained in proportion as a district is carefully patrolled and guarded in every part by the frequent and almost constant presence of officers. To reach this end, a large force is required in this District of Columbia; and without this, much which is required and expected of the force cannot be accomplished.

As the result of local experience and observation, and information gained in other cities, the board is satisfied that, to secure protection to persons and property, the patrol-force of the District of Columbia should be at least 400 men. As an illustration of the necessity to which we refer, the following statistical information is submitted:

In the city of Washington there are three hundred and thirty miles of streets and alleys to be patrolled. The building-squares, as numbered, of the plat of the city, are 1,170, affording a building-capacity for about 400,000 inhabitants. Besides this there are, within the limits of the city, public grounds and reservations covering an area about one-fourth as great as that of the building-squares referred to. Now, this area is more or less densely occupied by dwellings throughout the entire city-limits, and should be guarded by the police. But, to accomplish this end, by

making such arrangements of the beats of the men as experience teaches is best adapted to secure a thoroughly efficient protection to life and property, would require a force of 800 men. And here let a brief statement show how greatly below the real needs of the service the strength of the present force is. There are 141 privates assigned to active patrol-duty in the city of Washington. One-half of this number, or 72 men only, can be placed on regular duty at night, when the largest force is required. Dividing the number of miles of streets and alleys (330) by the number of men assigned to night-duty, gives each man a beat equal to $4\frac{7}{72}$ miles in length. In the day-time, for various reasons, the force is frequently less than one-half of that on duty at night, and consequently the beats are more than double in length, or between nine and ten miles long. It is not strange that, under such circumstances, citizens often complain that they cannot see a policeman when wanted. But when it is considered that in these calculations no allowance is made for sickness, absence from other causes, double beats when it is dangerous to send one man alone, attendance at court, &c., the average beats are necessarily much larger, and in the end it will be found that, even with 800 policemen, the District would not be over-supplied.

It may not be inappropriate here to state that the Government employs in the various Departments and public buildings more than one hundred watchmen and police-officers, at a cost not less, probably, than $100,000. This force is entirely distinct from, and not auxiliary even to, the Metropolitan-police force. The board is not aware of what arrests, if any, are made by the men thus employed, except on occasions when made by such of them as have been commissioned by it as additional privates, or under what particular regulations they are controlled. Of this fact the board feels assured, that the number thus employed and the amount expended in their support merits strict supervision and accountability of their labors. It is respectfully suggested that it would be well to inquire whether the duties devolved upon this class of officers could not be as well, if not better, performed if subjected to the discipline and supervision prescribed by the board for the government of its force.

Whatever is done by these employés it is but reasonable to presume must be in the nature of police-duty. If it be so, then there would seem to be an eminent propriety in their joint alliance with and into the Metropolitan-police system of the District, and be placed under such discipline and surveillance in common as is accorded to all the members of that force.

It is believed that such a unity of forces, if placed under the supervision and held especially accountable to the same executive head, would largely enhance the efficiency and value of the entire police-establishment of the District of Columbia, and exert a valuable moral influence elsewhere. Aside from the benefits that would result from this means of bringing the guards or watchmen of all the present subdivisions in buildings and localities under the same central head, and consolidating their forces into a legion of associated power, the respective heads of Departments would be relieved from numerous importunities in regard to this service, and more free in the undisturbed performance of other duties.

And here it may be added that the present Metropolitan-police force has been in existence over thirteen years, having been organized in September, 1861. Quite a number of the present members of the force were appointed at its organization, and the fact that they are now members is conclusive evidence that they have performed faithful service

during this long term of years. Others have been employed to fill vacancies, as they have occurred from time to time, during these thi rteen years. As an unavoidable result, many of these men are becoming advanced in years, as well as old in the service of the board. The exposures and hardships necessary to a policeman's life are gradually but surely undermining the constitutions and health of such members of the force as have served faithfully for a term of years. The efficiency of a few for street-duty is already seriously impaired, and that of others must follow. If the board had the opportunity of assigning such members of the force as become incapacitated for the exposures of street-duty, to posts where they would be less exposed to inclement weather, many years of faithful and efficient service could be utilized in a manner highly advantageous to the Government, not only in a financial view, but to the efficiency of the civil service in this District. It cannot be presumed that Congress would for an instant tolerate a policy which would cast a class of its employés upon the charities of the public, who under the provisions of its laws have given the best part of their lives to the service of the Government, and who have wrecked their physical energies and broken down their healths in the discharge of duties incident to their avocations. It should be borne in mind that the pay of policemen is barely sufficient to support themselves and families, and that being required to devote their time to official duties to an extent which precludes them from engaging in other employment, they have no opportunity to accumulate means to supply the necessaries of life when sickness and old age shall prostrate their energies and hamper their activity. Under the laws of Congress members of this force are appointed for a term co-extensive with good behavior, and can be removed only "for cause." There can be no doubt that the term "for cause" must be construed to mean some voluntary act of omission or commission in the performance of official duty, or some moral delinquency affecting their standing as citizens or members of society. There is, then, or may be, a class of police-officers, who, performing all their moral and official obligations to the satisfaction of the board so far as they come to its knowledge and observation, that become aged or infirm in its service. This class, almost of necessity, must be composed of upright and reliable men. It therefore becomes, and is even now, to some extent, a practical question as to what disposition shall be made of this class of policemen. They cannot be rightfully or legally dismissed the force, and it would be inhuman to do so if it could be done. What, then, can be done, and what should be done, for members of the force whose long term of service, coupled with failing health or advanced years acquired in the line of duty, admonishes us that in no distant future they must become incapacitated for active and efficient street-duty? Either they must become pensionaries or be transferred to posts of duty less subject to exposure and hardship. It is, therefore, earnestly suggested by the board that the policing of the public buildings and grounds could be efficiently, satisfactorily, and economically performed by the class of men in question, under the direction and supervision of this board. With this view, the subject is respectfully submitted for your consideration and recommendation.

DISCIPLINE OF THE FORCE.

In the enforcement of discipline and efficiency on the part of the force, charges have been preferred and trials accorded by the board in ninety-four cases, resulting as follows, viz:

Dismissed the force	7
Dropped from the rolls	1

Reduced to the ranks	1
Reprimanded	20
Fined	8
Cautioned, but complaint dismissed	10
Complaints dismissed	47

A very satisfactory state of efficiency has been maintained on the part of the force during the past year.

Very few riotous demonstrations have occurred, and none of a grave character, or followed by serious results. Such as have arisen have been promptly quelled. There has also been a marked absence of heinous crimes during the year.

STATION-HOUSES.

Little or no improvement has been made since the last report in the station-houses occupied by the force. It is a matter of surprise and regret that the local authorities of the District have permitted some of the buildings occupied as station-houses to remain in their present condition. Two of them have been condemned by the board of health as nuisances, dangerous to life and health. So dilapidated and pestilential had these buildings become, that the board has been compelled to dispense with the reserve force for the precincts in which they are located, for the reason that the health of nearly all the men assigned to those stations was being seriously impaired, and much time was being lost from sickness. A portion of the men in each precinct, while not on active patrol-duty, should remain in reserve at the stations to meet emergencies. This class of duty has been necessarily dispensed with for reasons above stated, and that, too, in a central part of the city of Washington, where the services of such reserves are most in demand. The efficiency and discipline of the force is being greatly impaired by this want of proper station-house accommodations. Nor should the lives and health of unfortunate persons who may be arrested be put in peril by being confined in the unavoidably filthy and noxious cells attached to most of the stations. That the peril of life is imminent in many such cases is certain. It is a matter of daily and almost hourly occurrence that drunken persons, exhausted from debauch and excesses, are brought to station-houses, where for the want of other places of confinement they must be placed in these foul, unventilated cells, oppressively hot in summer, and damp and cold in winter. So overrun with vermin are the most of them, that it is a torture and agony to a prisoner to be confined in them, not to say disgusting to a proper sense of cleanliness, and disgraceful to the capital of our nation. It is a punishment inflicted before conviction, and a torture tolerated only during the Dark Ages. It is a revival and tolerance of the horrors of the black-hole of Calcutta in the capital of the United States of America. This language may seem strong, but it is believed to be justified by the actual condition of many of these cells. The picture is neither overdrawn nor exaggerated. From year to year the board has urged an improvement in the condition of the station-houses, but without results, and the attention of the municipal authorities has been much more frequently drawn to the matter, resulting sometimes in visits of inspection by committees and reports acknowledging the vile condition of the stations and cells, denouncing further neglect as criminal, and their continued use as inhuman. Spasmodic attempts by our legislative councils have been made to provide for the erection of better buildings, but these efforts have always failed.

Congress has by law made it obligatory upon our local authorities to provide station-houses, and warm, light, and cleanse them. This duty has thus far been shamefully neglected by those charged with its performance. Considerations of economy, if prompted by no higher motive, should speedily provide a remedy for this neglect. Much of the time lost by members of the force through sickness is undoubtedly attributable to the condition of the station-houses. Without conveniences for warming, drying, and rest at the stations, the men must, as an unavoidable result, contract sickness and disease, which are followed by loss of time and lack of efficiency.

It is earnestly recommended that an effective remedy be applied to the negligence in this regard, and that an appeal be made to Congress to appropriate the means to provide such station-houses as will be compatible with efficiency and humanity, and make its own terms for re-imbursement by the authorities of the District, if Congress is still of the opinion that the citizens of the District shall defray the expense of these establishments.

DETECTIVE-CORPS.

The duties of the detective-corps have been very satisfactorily performed during the year. Much valuable property, which has been lost or stolen, has been recovered and restored to owners. Marked success has also resulted from their efforts to ferret out criminals, and furnish evidence for their conviction and punishment. With one or two exceptions, no professional thieves have visited the District for the purpose of plying their vocation; a fact which speaks well for the efficiency and honesty of the corps. Were professional thieves in the habit of making our community a place wherein to despoil our citizens of property, there would be cause to doubt either the efficiency or honesty of this corps. A more detailed account of the operations of the detective-corps will be found in the report of the major and superintendent of the force to this board; a copy of which is appended hereto.

POLICE-TELEGRAPH.

During the past few months the board has renewed the lines of the police-telegraph throughout the entire District. This renewal had become absolutely necessary on account of the dilapidated condition of the line, resulting from the wires being attached to chimneys and roofs of houses, instead of poles erected for the purpose. The old line had also been in use nearly twelve years, and, as a consequence, the wires had become corroded and unreliable. The board has also extended its lines to Tennallytown, Brightwood, the Reform-School, and Benning's Station, across the Eastern Branch of the Potomac. All the important objective points within the District are now in communication with police-headquarters by telegraph. The entire line of wire is now attached to poles erected for the purpose. This means of communication is a great saving of time to the force in giving and receiving information from distant points, and thereby adds largely to the efficiency and facility of police-operations. An exhibit of the work performed by this auxiliary will be found in the annexed report of the major and superintendent.

LICENSES FOR LIQUOR-SELLING.

Under the provisions of the third section of the act of Congress approved July 23, 1866, the board has made the following disposition of

applications made for the approval of licenses for the retail sale of intoxicating liquors during the past year, viz:

Number of applications made	419
Number of applications approved	320
Number of applications disapproved	99
Number of transfers approved	16

The number of applications made this year is one more than last year. The number approved is fifty-one less than last year. The number of disapproved is fifty-two more than last year, and the number of transfers approved is twenty-two less this year than last.

The board embraces this opportunity of again stating, as it has in several previous annual reports, that under the operation of our laws it is found impossible to prevent the sale of intoxicating liquors without license. The better class of saloon-keepers obtain licenses, while a very large number of low shops sell the vilest kinds of liquors without license. Numerous complaints are entered at the police-court, arrests made, and convictions obtained in that court, but in almost every instance an appeal is noted, which must be allowed. The appeal is certified to the criminal court, where it comes before a jury, when from one cause or another an acquittal is the result in most instances. This evil will go on and increase unless some effective and summary process is devised to prevent illicit traffic in intoxicating drinks. Not one nor all the evils combined which afflict this community lead to as much misery, suffering, pauperism, demoralization, and crime as flow from indulgence in intoxicating drinks. And a very large proportion of these lamentable results proceeds directly from dram-shops which dispense liquors not simply in violation but in defiance of law.

An exhibit of the property-operations of the department, together with certain tabulated information and valuable suggestions with reference to the legal disposition of property-waifs, will be found in the report of the property-clerk, appended hereto. The board respectfully invites your consideration of the question of property-waifs, as submitted in its last annual report and referred to in the report of the property-clerk, in the hope that you may perceive such merit as will induce a recommendation for necessary legislation.

Your attention is also respectfully directed to the statement of the accounts of the treasurer of the board, transmitted herewith.

For a more detailed exhibit of the work performed by the force during the year, together with important and valuable tabular and statistical information, attention is called to the report of the major and superintendent of the force.

To the Board of Metropolitan-Police Commissioners:

GENTLEMEN: I have the honor to submit herewith a report of the operations of the Metropolitan-police force of this District, for the year ending September 30, 1874. This report is confined mainly to tabulated and statistical information, together with a general summary of the duties performed by the force.

The tables submitted herewith show the number and disposition of the force, the time lost by sickness and other causes, the total number of arrests made by the force, classified by precincts, a classification of the ages of the males and females arrested, each separately, the

nativity of persons arrested, a classification of the offenses against the person for which persons have been arrested, and the number arrested for each offense; a similar classification of offenses against property; and, lastly, a table showing the trades and callings of persons arrested.

The following is a summary of the operations of the detective branch of the service so far as they can be made a matter of record. A large part of the service by the detectives is of such a character that no showing can be made of it in a report of this kind. Detectives should exercise the utmost vigilance in preventing crime and making themselves acquainted with criminals and their operations, associates, haunts, &c., &c. It is their special duty, after crimes have been perpetrated, to inquire into all the circumstances attending their execution, and to pursue all proper measures to recover property stolen and to trace out and apprehend criminals, and furnish evidence for their conviction.

The number of robberies reported is	895
The number of arrests made	512
Amount of property reported lost or stolen	$29,411 49
Amount of property recovered	35,954 89
Amount of property turned over to property-clerk	10,165 00
Amount of property turned over to owners	25,789 89
Amount of property taken from persons and returned to the same	2,867 02

The amount of property recovered being greater than that reported lost or stolen is accounted for from the fact that frequently property is recovered without being, or before it is, reported lost or stolen.

The board of health having, under authority of Congress, special charge of the sanitary condition of this District, comparatively little has been done in that line, and that of such a character as required prompt action. But one private has been engaged in the active sanitary work.

The following statement will show the number of sick and destitute persons sent to hospitals and asylums, the number of non-resident paupers furnished with transportation to other cities, the number of broken pumps, hydrants, and dangerous excavations, &c, reported to the District authorities, and the number of notices served for the board of health, including those served by precinct officers:

Number of non-resident paupers furnished with transportation to other cities, procured from governor of District of Columbia	28
Number of broken pumps, hydrants, and dangerous excavations, &c., reported to the District authorities	100
Number of notices served for board of health	1,208

Number of sick and destitute persons sent to hospitals and asylums by the sanitary detail, for the year ending September 30, 1874, was as follows, viz:

To the Washington Asylum	205
To the Providence Hospital	67
To the Government Hospital for the Insane	51
To the Freedmen's Hospital	5
To the Columbia Hospital	14
To the Children's Hospital	2
To the jail hospital	1
To the Women's Christian Association Home	1
Total	346

The nativity of persons sent to the hospitals and asylums is as follows, viz:

United States	276
Ireland	36
Germany	25
England	7
Poland	1
Canada	1
Total	346

Miscellaneous duty performed by the sanitary detail during the year is as follows, viz:

Number of persons buried on orders given by the authorities of the District	170
Number of helpless persons assisted	19
Number of abandoned infants found by officers	14

The following is a synopsis of work done by the police-telegraph during the past year. There have been 33,271 messages received and transmitted at the central office, classified as follows:

Number of dead animals reported	1,397
Number of dead animals reported to health-office	1,467
Number of animals lost and description telegraphed	330
Number of vehicles lost and description telegraphed	95
Number of children lost and description telegraphed	130
Number of animals found and reported	240
Number of vehicles reported found	92
Number of children reported found	123
Number of officers summoned to court	160
Number of officers ask to wear citizens' clothes	267
Number of prisoners for van	4,220
Number of orders issued by major and superintendent	239
Number of orders issued by captain and inspector	250
Number of orders issued by lieutenants of precincts	113
Number of items for reporters	1,105
Number of times surgeons sent for	64
Number of times coroner has been notified	115
Number of alarms of fire	30
Number of inquiries for lost persons	[illegible]
Number of citizens summoned to court	236
Number of persons wanted and descriptions telegraphed	327
Number of times reserves ordered	161
Number of dispatches to and from health-office	2,[illegible]70
Number of dispatches on sanitary business	755
Number of dispatches on personal matters	4,16[illegible]
Number of miscellaneous dispatches	14,0[illegible]5
	33,271

A large number have been sent between the different precinct-stations of which no record has been kept at the central office.

RECAPITULATION.

The following is a recapitulation of the work done by the police-force during the year ended September 30, 1874, a more extended exhibit of which will be gathered from the following tables.

The whole number of arrests during the year has been 13,192, of which 11,122 were males; 2,070 were females; 4,832 were married; 8,360 were single; 8,361 could read and write; 4,831 could not read and write.

The offenses may be classified as follows: Offenses against the person, 7,592 males; 1,557 females. Offenses against property, 3,530 males; 513 females.

Of the cases reported, the following dispositions have been made: 4,945 were dismissed; 17 were turned over to the military; 1,298 were sent to jail for court; 127 gave bail for court; 1,470 were sent to the work-house; 261 gave security to keep the peace; 50 were sent to the Reform-School; 85 not disposed of, and in 1,310 cases various light punishments have been inflicted, and they have been classed under the head of miscellaneous.

Fines have been imposed in 3,629 cases, amounting in all to $37,248.25, as follows, viz:

In District of Columbia cases	$14,816 50
In United States cases	7,145 75
In District of Columbia cases appealed	11,126 00
In United States cases appealed	4,160 00
	37,248 25

INCIDENTAL DUTIES.

The number of destitute persons furnished with lodging has been during the year	7,177
Lost children restored to parents	176
Sick or disabled assisted or taken to hospitals	612
Horses, cattle, or vehicles found astray and restored to owners	251
Doors left open and secured by police	140
Fires attended in the District	163
Accidents reported	97
Inquests attended	45
Dead and abandoned persons and infants found	43
Suicides	3
Friendless persons buried on orders given by District authorities	154

Very respectfully,

A. C. RICHARDS,
Major and Superintendent.

No. 1.—*Table showing the disposition of the force.*

Precincts.	Major and superintendent.	Captain and inspector.	Lieutenants.	Sergeants.	Privates.	Detailed.	Vacancies.	Total.
First	.....	.....	1	2	24	2	.....	29
Second	.....	.....	1	2	22	.....	.....	25
Third	.....	.....	1	3	20	1	.....	25
Fourth	.....	.....	1	2	24	1	.....	28
Fifth	.....	.....	1	3	23	2	.....	29
Sixth	.....	.....	1	2	23	.....	.....	26
Seventh	.....	.....	1	3	28	2	.....	34
Eighth	.....	.....	1	3	25	.....	.....	29
	1	.....	.....	.....	.....	.....	.....	1
	.....	1	.....	.....	.....	.....	.....	1
Detectives	.....	.....	.....	.....	6	.....	.....	6
Sanitary	.....	.....	1	.....	3	.....	.....	4
Total	1	1	10	20	198	8	.....	238

No. 2.—*Table showing time lost by sickness and other causes.*

Precincts.	With leave.	Without leave.	Sick.	Days.
First	104	10	325	439
Second	142	60½	257½	460
Third	74	3	294	371
Fourth	116	4	233	353
Fifth	179	1	510	690
Sixth	95	25	690	810
Seventh	155	14	558	727
Eighth	175	2	454	631
Detectives	4	.....	32	36
Sanitary	4	.....	33	37
Total	1,048	119½	3,416½	4,524

No. 3.—*Table showing number of arrests in each precinct.*

Precincts.	Males.	Females.	Total.
First	1,471	474	1,945
Second	1,436	226	1,662
Third	1,000	173	1,173
Fourth	1,013	155	1,168
Fifth	2,018	400	2,418
Sixth	720	108	828
Seventh	1,780	266	2,046
Eighth	1,218	202	1,420
Sanitary	20	.....	20
Detectives	446	66	512
Total	11,122	2,070	13,192

No. 4.—*Table showing the ages of the males arrested classified.*

Precincts.	From 10 to 20.	From 20 to 30.	From 30 to 40.	40 and over.	Total.
First	283	458	215	516	1,471
Second	485	460	246	245	1,436
Third	157	360	280	203	1,000
Fourth	229	324	229	231	1,013
Fifth	302	741	534	441	2,018
Sixth	132	257	183	148	720
Seventh	394	574	454	358	1,780
Eighth	309	454	253	207	1,223
Sanitary	1	5	8	6	20
Detectives	121	196	85	44	446
Total	2,407	3,899	2,487	2,399	11,122

No. 5.—*Table showing the ages of the females arrested classified.*

Precincts.	From 10 to 20.	From 20 to 30.	From 30 to 40.	40 and over.	Total.
First	147	156	139	32	474
Second	71	63	53	19	226
Third	41	45	48	39	173
Fourth	29	55	44	27	155
Fifth	77	213	66	44	400
Sixth	31	39	20	18	108
Seventh	35	74	97	60	266
Eighth	48	87	36	31	202
Sanitary	.....	.....	.....	.....	.....
Detectives	18	27	13	8	66
Total	497	779	716	278	2,070

No. 6.—*Recapitulation of offenses classified.*

Offenses against the person.	Males.	Females.	Total.
dultery	2	2	4
ffray	201	8	209
ssault	75	19	94
ssault and battery	1,419	278	1,697
ssault and battery with intent to kill	60	7	67
ssault on policemen	46	2	48
bortion	1	2	3
ttempt at rape	12	.....	12
igamy	6	.....	6
astardy	23	.....	23
arrying concealed weapons	8	.....	8
ontempt of court	31	14	45
isorderly conduct	1,022	337	1,359
eserters	22	.....	22
nticing prostitution	.....	1	1
ast riding or driving	50	1	51
ighting in the streets	80	26	106
ugitives	62	3	65
abitual drunkenness	1	2	3
ntoxication	2,740	266	3,006
ntoxication and disorderly	801	217	1,018
nfanticide	.....	3	3
nsanity	31	3	34
ndecent exposure of the person	47	1	48
nsulting females on the street	1	.....	1
nterfering with policemen	7	.....	7
eeping disorderly house	3	1	4
eeping bawdy-house	6	30	36
eeping gambling-house	8	.....	8
Miscellaneous misdemeanors	83	14	97
Murder	9	1	10
erjury	6	.....	6
rofanity	87	24	111
rostitution	.....	14	14
ape	6	.....	6
ioting	4	.....	4
esisting officer	53	.....	53
hreats of violence	296	100	396
agrancy	255	170	425
Witness to murder confined in default of security	28	11	39
Total	7,592	1,557	9,149

No. 7.—*Recapitulation of offenses classified.*

Offenses against property.	Males.	Females.	Total.
rson	22	2	24
ttempt at arson	2	1	3
ttempt at burglary	2	.....	2
ttempt to steal	10	.....	10
urglary	33	1	34
ruelty to animals	39	.....	39
mbezzlement	15	.....	15
orgery	16	1	17
raud	5	1	6
rand larceny	176	23	199
ambling	29	2	31
alicious mischief	48	.....	48
btaining goods or money under false pretenses	65	5	70
etit larceny	783	187	970
ickpockets	1	.....	1
obbery	45	4	49
eceiving stolen goods	18	2	20
uspicion	396	33	429
respass	101	1	102
iolation of corporation ordinances	1,721	250	1,971
iolating internal-revenue laws	3	.....	3
Total	3,530	513	4,043

No. 8.—*Nativity of those arrested classified.*

Nativity.	Number.	Nativity.	Number.
United States, (white)	5,264	Holland	2
United States, (colored)	5,479	Poland	3
Ireland	1,619	Spain	1
Germany	574	Switzerland	4
Italy	28	Wales	2
England	116	Cuba	1
France	45	Sweden	3
Scotland	43	Prussia	1
Belgium	1		
Canada	5	Total	13,192
Denmark	1		

No. 9.—*Table showing trades and callings of persons arrested.*

Trades.	Number.	Trades.	Number.
Artists	3	Gardeners	57
Actors	14	Gamblers	12
Agents	106	Gas-fitters	3
Apprentices	14	Hotel-keepers	5
Auctioneers	6	Hackmen	97
Architects	4	Hatters	12
Bakers	67	Hucksters	159
Barbers	80	Housekeepers	708
Bar-keepers	68	Horse-farrier	1
Blacksmiths	130	Horse-dealers	3
Boatmen	121	Hostlers	10
Boiler-makers	13	Harness-makers	19
Book-binders	15	Iron-worker	1
Bell-hanger	1	Jewelers	13
Brewers	12	Junk-shop keepers	13
Bricklayers	196	Janitors	4
Brick-makers	21	Laborers	4,114
Brokers	8	Loafers	19
Brass-finisher	1	Lawyers	67
Broom-makers	2	Lamp-lighters	7
Builder	1	Livery-stable keepers	5
Butchers	111	Locksmiths	3
Block and pump maker	1	Merchants	121
Billiard-maker	1	Machinists	55
Bill-poster	1	Magistrates	2
Banker	1	Millers	10
Carpenters	404	Member of Congress	1
Carpet-cleaner	1	Messengers	33
Cartmen	81	Marines	118
Cabinet-makers	19	Miners	6
Cigar-makers	58	Molders	32
Coach-makers	16	Masons	3
Coachmen	13	Musicians	10
Clock-makers	2	Nurse	1
Cooks	27	Notary public	1
Coopers	11	Newsboys	44
Confectioners	10	Occupations unknown	267
Contractors	74	Oystermen	3
Clerks	453	Pump-maker	1
Conductors	3	Paper-hangers	3
Chandler	1	Potters	3
Calkers	3	Peddlers	5
Car-drivers	91	Printers	174
Constables	14	Physicians	12
Dairymen	32	Plasterers	110
Dentist	1	Prostitutes	676
Draughtsmen	1	Preacher	1
Dress-makers	2	Paper-maker	1
Drivers	113	Painters	217
Drovers	25	Pavers	34
Druggists	19	Pawnbroker	1
Door-keepers	2	Police-officers	5
Editors	3	Photographers	2
Engineers	38	Publishers	2
Engravers	8	Porters	7
Foremen	2	Plumbers	9
Farmers	123	Restaurant-keepers	63
Firemen	15	Rag-pickers	16
Fishermen	17	Railing-maker	1
Fruit-dealers	4	Rope-makers	3
Grocers	52	Reporters	2

No. 8.—*Table showing trades and callings of persons arrested*—Continued.

Trades.	Number.	Trades.	Number.
iggers	3	Stewards	3
ailors	207	Tailors	79
oldiers	155	Teamsters	99
ail-maker	1	Tinners	66
ervants	710	Telegraphists	2
hoe-makers	114	Thieves	589
hoe-blacks	78	Upholsterers	31
hingle-maker	1	Umbrella-maker	1
tone-cutters	143	Undertakers	2
chool-masters	8	Vagrants	94
tore-keepers	126	Washer-women	23
howmen	4	Wheelwrights	11
addlers	18	Watchmen	42
tudents	341	Wagon-masters	3
urveyor	1	Weavers	5
cavengers	3	Waiters	14
eamstresses	6	Whitewashers	5
exton	1	Wood-cutter	1
hip-carpenters	8		
ilversmith	1	Total	13,192

DEPARTMENT OF METROPOLITAN POLICE,
Office of Treasurer, Washington, October 20, 1874.

To the Board of Police:

In the act making appropriations for sundry civil expenses of the Government, approved March 3, 1873, in which was an appropriation for the expenses of the Metropolitan Police, there was a provision transferring the supervision thereof from the Secretary of the Interior to the Attorney-General, which also charged that officer with the disbursement of that appropriation. By reason of that legislation no public moneys passed through this office during the year ending June 30, 1874.

A statement of the condition of the "policemen's fund" from January 1, 1873, the date of my election as Treasurer, to the 30th ultimo, with the report of your committee of audit, is herewith respectfully submitted.

H. M. SWEENY,
Treasurer.

DEPARTMENT OF METROPOLITAN POLICE,
OFFICE OF MAJOR AND SUPERINTENDENT,
No. 482 *Louisiana Avenue, Washington, September* 30, 1874.

otal amount of money advanced by the treasurer of the board of police	$7,220 49
y cash paid back	4,452 72
Leaving a balance of	2,767 77

ASSETS.

ash on hand	$2,042 63
ne for cloth	37 34
oods and remnants	862 53
ne packing-box	7 00
	2,949 50
	2,767 77
Increase cloth-fund in cloth	181 73

The above is correct.

W. G BROCK.

The Board of Metropolitan Police in account with H. M. Sweeny, treasurer, on account of the policemen's fund, from January 1, 1873, to September 30, 1874.

Dr.				Cr.		
Date.	Disbursements, &c.	No. of voucher.	Amount.	Date.	Advances, &c.	Amount.
1873.				1873.		
Feb. 2	To Mrs. Ch. L. Boarman...	1	$75 00	Jan. 1	By cash	$4,221 [illegible]
5	To Mrs. E. B. Hickman....	2	75 00	1	By U. S. bonds.....	5,000 00
22	To Mrs. Jeff Robinson	3	75 00			
Oct. 24	To Mrs. J. W. Franklin ...	4	75 00	1874.		
1874.				Sept. 30	By sale of $1,000 U. S. 5-20 bonds at 12 cts.	1,120 00
Feb. 12	To John Kane	5	10 00	30	By sales of gold	508 [illegible]
Mar. 13	To Mrs. A. Kneas	6	75 00	30	By property sales	440 75
25	To Mrs. G. W. Frazier	7	75 00	30	By fines for loss of time, &c..	267 14
May 18	To purchase of $1,000 U. S. 5 20 bonds at 17¼ cts ..	8	1,172 50	30	By fines of board.....	200 00
Sept. 3	To Mrs. Robert Fleet	9	75 00	30	By rewards	87 75
			1,707 50			11,844 14
	Unexpended balance...	.....	10,136 64			
			11,844 14		By balance.....	10,136 64

Bonds	$5,000 00	Correct.
Cash in hands of captain and inspector ...	2,287 13	Correct, as shown by certificate of captain and inspectors.
Cash in hand of treasurer	2,849 51	Correct.
	10,136 64	

The undersigned, the committee appointed at the last meeting of the Board of Metropolitan Police, to audit the account of the treasurer of the board with the policemen's fund, respectfully report that they have personally examined the treasurer's vouchers and other evidences of credit to him, and the bonds, cash, and other evidences of debit to him, and found them correct in accordance with this statement, bearing date September 30, 1874.

We recommend that the treasurer be authorized by the board to invest such portions of the cash now in his hands belonging to the policemen's fund as shall seem to him suitable in view of the necessity of keeping a proper amount of cash on hand to purchase cloth for policemen's clothing, either in United States bonds, or in bonds guaranteed by the United States.

C. H. NICHOLS,
JAMES G. BERRET,
Auditing Committee.

Report of property-clerk.

DEPARTMENT OF METROPOLITAN POLICE,
Property rooms, Washington, October 12, 1874.

SIR: I have the honor to transmit herewith tabular statements showing the property operations of the department during the year ending September 30 ultimo, as reported to this office.

There was received at this office property valued at $19,827.69, of which $9,645.77 was returned from the several precincts and sanitary

office, and $10,181.92 from the office of the detective corps. The aggregate deliveries to claimants, on orders of courts and other evidences of ownership, amounted to $17,393.33, of which $7,393.65 had been returned from the patrol and sanitary forces and $9,999.68 from the detective service. (See Statement A.)

Statement B exhibits, by months, the entire property operations of the department other than that which passed through this office by reason of contest or other operations of law, and amounted to $132,201.23. Thus it will be seen that property to the aggregate amount of $152,028.92 came into the department; that during the same time $149,594.56 was restored to claimants, leaving a sum equal to $2,434.36 undisposed of.

The sale of abandoned and unclaimed property held more than six months, made the 1st of July last, produced $158.41 net, which was returned to the treasurer of the board.

In its last annual report the board of police submitted to the Department of Justice the propriety of specific legislation for governing the disposition of lost property-waifs. It does not admit of a doubt that the establishment of a central depot connected with this office or elsewhere, where every article of value that may be lost and found shall be deposited for the benefit of its owner, must be of public service. But, as the laws now are, with the laxity of morals existing with regard to the proprietary rights of the real owners of such property, it is respectfully reiterated and submitted, that stringent laws, requiring the prompt surrender and return to a central depot of all property-waifs found by any person within the police district, under a penalty of a charge of larceny, would have a salutary influence in lessening crime, and be, at the same time, a great public convenience.

Very respectfully, your obedient servant,

GEO. R. HERRICK,
Property Clerk.

WM. J. MURTAGH, Esq.,
President Board of Police.

A.—Statements exhibiting the value of property and money received at the office of the property-clerk and delivered therefrom during the year ending September 30, 1874.

Estimated amounts received in each month:

1873.	
October	$635 50
November	1,834 75
December	948 27
1874.	
January	8,257 00
February	764 75
March	783 65
April	705 10
May	890 50
June	1,507 85
July	503 00
August	1,514 47
September	1,482 85
Total receipts	19,827 69

Amounts delivered on orders of courts and evidences of ownership:

1873.	
October	$51 00
November	717 00
December	392 95
1874.	
January	1,768 75
February	875 00
March	8,106 95
April	545 50
May	454 25
June	2,027 50
July	448 68
August	1,120 75
September	865 00
Total delivered	17,393 33

ively, and delivered to others than the property-clerk, during the year ending September 30, 1874, as compiled from the weekly reports to that office.

Months and years.	Precincts.								Detective corps.	Sanitary company.	Total amounts.
	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.			
October, 1873	$175 60	$1,850 12	$1,103 48	$760 19	$3,264 88	$609 51	$710 11	$992 25	$499 05	$39 75	$10,004 94
November, 1873	1,062 47	892 19	635 63	690 00	2,353 98	359 51	1,965 90	270 05	1,735 35	.....	9,965 08
December, 1873	839 15	2,119 02	2,392 74	2,197 74	2,762 73	88 58	867 68	4,367 73	2,989 00	6 00	18,630 36
January, 1874	845 25	1,052 69	904 76	743 15	984 00	841 57	447 09	259 70	2,267 50	10 15	8,355 86
February, 1874	145 55	1,413 20	417 96	873 75	877 94	1,260 32	5,368 80	272 70	4,103 29	.....	14,733 51
March, 1874	593 83	1,340 42	207 40	567 10	1,483 28	1,074 27	702 98	1,666 57	6,245 00	.....	13,880 85
April, 1874	137 00	791 28	800 55	168 10	1,583 85	405 95	1,036 99	611 70	2,102 00	.....	7,637 33
May, 1874	324 72	1,109 16	524 73	680 33	1,331 35	389 40	2,066 75	337 25	330 00	.....	7,093 69
June, 1874	1,089 90	915 52	973 23	777 60	4,750 41	113 47	444 85	2,470 86	2,527 35	.....	14,063 19
July, 1874	397 75	1,057 01	659 77	757 03	2,028 36	334 45	540 69	451 95	997 00	6 95	7,230 96
August, 1874	388 42	2,366 45	1,321 13	359 44	1,838 82	974 33	1,462 91	1,956 60	3,327 62	.....	13,995 72
September, 1874	311 33	667 14	865 05	176 07	1,438 85	595 50	468 11	637 86	1,449 83	.....	6,609 74
Total	6,310 97	15,574 20	10,806 43	8,750 50	24,698 44	7,076 86	16,082 77	14,295 22	28,572 98	62 85	132,201 23